STORM WATER POLLUTION PREVENTION PLAN

FOR

California State Route 36 Improvement Project
Phase 2

Prepared for:
Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue
Lakewood, CO 80228
James Herlyck
720.963.3698

Contractor:

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Project Address:
California State Route 36 (SR 36) from HUM Milepost (MP) 36.1 to HUM MP 40.5
CA FLAP SR36(13)
Humboldt County

SWPPP Prepared By:
Federal Highway Administration
Central Federal Lands Highway Division
12300 West Dakota Avenue
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SWPPP Preparation Date:
February 2015

Estimated Project Dates:
June 2017 – October 2018
Risk Level: 3

WDID No.: 1 12C378135

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Qualified SWPPP Developer

Approval and Certification of the Stormwater Pollution Prevention Plan

"This Stormwater Pollution Prevention Plan and Attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Orders No. 2009-009-DWQ as amended by Order 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

QSD Signature	Date
Opal Forbes, CPESC	4781
QSD Name	QSD Certificate Number
FHWA-CFLHD, Stormwater Permits Specialist	
Title and Affiliation	
opal.forbes@dot.gov	720-963-3431
Email	Telephone Number

Amendment Log

Project Name/WDID California SR 36 Improvement Project CA FLAP SR36(1)

Include references to section of SWPPP that has been amended, add additional pages as needed.

Amendment No.	**Date**	**Brief Description of Amendment, include section and page number**	**Prepared and Approved By**
			Name: QSD#
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Section 1 SWPPP Requirements

1.1 INTRODUCTION

This Stormwater Pollution Prevention Plan (SWPPP) was prepared for construction activities related to roadway improvements of approximatley 4.4 miles of California State Route (SR) 36 from Humboldt County Milepost (HUM MP) 36.1 to HUM MP 40.5 in Humboldt county, California. The project location is shown on the Site Map included in Appendix B.

The proposed road improvments include realigning and widening SR 36 to attain two, 12-foot-wide travel lanes with 4-fot-wide paved shoulders. The project will flatten the existing steep roadway and correct horizontal and vertical curves which do not meet current design standards. Additional features including slope stabilization measures and drainage improvements are included in the project. The project also includes the creation of a awetland mitigaiton site, east of the project site.

This SWPPP is designed to comply with California's General Permit for Stormwater Discharges Associated with Construction and Land Disturbance Activities (General Permit) Order No. 2009-0009-DWQ as amended by Order No. 2010-0014-DWQ and 2012-0006-DWQ (NPDES No. CAS000002) issued by the State Water Resources Control Board (SWRCB). In accordance with the General Permit, Section XIV, this SWPPP is designed to address the following objectives:

- "Pollutants and their sources, including sources of sediment associated with construction, construction site erosion and other activities associated with construction activity are controlled;
- "Where not otherwise required to be under a Regional Water Quality Control Board (RWQCB) permit, all non-stormwater discharges are identified and either eliminated, controlled, or treated;
- "Site Best Management Practices (BMPs) are effective and result in the reduction or elimination of pollutants in stormwater discharges and authorized non-stormwater discharges from construction activity to the Best Available Technology/Best Control Technology (BAT/BCT) standard."

Calculations applicable to this project are included in Appendix A.

1.2 GENERAL PERMIT COVERAGE

The Legally Responsible Party (LRP), James Herlyck, has submitted the Permit Registration Documents (PRDs) to the SWRCB Stormwater Multi-Application and Report tracking system (SMARTS). The SWRCB has issued a Waste Discharge Identification (WDID) number as indicated below:

WDID: 1 12C378135

1.3 SWPPP AVAILABILITY AND IMPLEMENTATION

The SWPPP shall be available at the construction site during working hours (see Project Specifications for working hours) while construction is occurring and shall be made available

upon request by a State or Municipal inspector. When the original SWPPP is retained by a Site Superintendent in a construction vehicle and is not currently at the construction site, current copies of the BMPs and map/drawing will be left at the Project Site and the original SWPPP shall be made available via a request by radio/telephone. (General Permit Section XIV.C)

The SWPPP shall be implemented concurrently with the start of ground disturbing activities.

1.4 SWPPP AMENDMENTS

The General Permit requires the SWPPP to be revised under the following conditions:

- If there is a General Permit violation. *"This General Permit requires dischargers with NAL exceedances to immediately implement additional BMPs and revise their Stormwater Pollution Prevention Plans (SWPPPs) accordingly to either prevent pollutants and authorized non-stormwater discharges from contaminating stormwater, or to substantially reduce the pollutants to levels consistently below the NALs or NELs." (General Permit Section I Part H No. 57 and 59)*
- When there is a reduction or increase in total disturbed acreage. *"Within 30 days of a reduction or increase in total disturbed acreage, the discharger shall electronically file revisions to the PRDs that include: ... SWPPP revisions, as appropriate ..." (General Permit Section II Part C)*
- BMPs do not meet the objectives of reducing or eliminating pollutants in stormwater discharges. *"Within two business days (48 hours) after each qualifying rain event, dischargers shall conduct post rain event visual observations (inspections) to (1) identify whether BMPs were adequately designed, implemented, and effective, and (2) identify additional BMPs and revise the SWPPP accordingly". (General Permit, Attachment C, D, or E part I.3.G).*

Additionally, the SWPPP shall be revised when:

- There is a change in construction or operations which may affect the discharge of pollutants to surface waters, groundwater(s), or a municipal separate storm sewer system (MS4);
- When there is a change in the project duration that changes the project's risk level;
- To identify any new Contractor and/or Subcontractor that will implement a measure of the SWPPP; or
- When deemed necessary by the QSD. The QSD has determined that the changes listed in Table 1.1 can be field determined by the QSP. All other changes shall be made by the QSD as formal amendments to the SWPPP.

The following items shall be included in each amendment:

- Who requested the amendment;
- The location of proposed change;
- The reason for change;
- The original BMP proposed, if any; and

- The new BMP proposed.

The SWPPP text shall be revised replaced, and/or hand annotated as necessary to properly convey the amendment. SWPPP amendments must be made by a QSD and logged in the Amendment Log on page 2 of the SWPPP. Additionally a SWPPP Amendment Certification shall be completed by the QSD and maintained in Appendix D, for each amendment.

The following changes listed in Table 1.1 have been designated by the QSD as "to be field determined" and constitute minor changes that the QSP may implement based on field conditions and do not require a SWPPP amendment. The SWPPP progress map shall be updated to reflect field changes.

Table 1.1 List of Changes to be Field Determined

Changes for field location or determination by QSP[(1)]	Check changes that can be field located or field determined by QSP
Increase quantity of an erosion or sediment control measure	✓
Relocate/Add stockpiles or stored materials	✓ *
Relocate or add toilets	✓
Relocate vehicle storage and/or fueling locations	✓
Relocate areas for waste storage	✓
Changes to access points (entrance/exits)	✓
Change type of erosion or sediment control measure	✓ *
Changes to location of erosion or sediment control	✓
Minor changes to schedule or phases	✓
Changes in construction materials	✓ *

(1) Any field changes not identified for field location or field determination by QSP must be approved by QSD
*(2) * Requires Contracting Officer approval*

1.5 RETENTION OF RECORDS

The Contractor must provide a copy of the SWPPP, all required PRDs, inspection reports, compliance certifications and annual reports, non-compliance reports, and training records to the LRP upon project completion. The LRP will retain this information for at least 3 years from the date that the site is finally stabilized. The Contractor must retain a copy of the SWPPP and inspection reports at the construction site from the date of project initiation to the date coverage under the General Permit is terminated.

1.6 REQUIRED NON-COMPLIANCE REPORTING

Corrective measures will be implemented immediately following pollutant laden discharges (e.g. sediment, concrete) or following written notice of non-compliance from the Lahontan Regional Water Quality Control Boards (RWQCB). Any instances of non-compliance with the

requirements of the General Permit must be reported within 48 hours of detection of the non-compliance. Discharges and corrective actions will be documented on the Inspection and Monitoring Forms in Appendix J.

The report will contain the following items:

- The date, time, location, nature of operation and type of unauthorized discharge.
- The cause or nature of the notice or order.
- The control measures (BMPs) deployed before the discharge, or prior to receiving notice or order.
- The date of deployment and type of control measures (BMPs) deployed after the discharge event, or after receiving the notice or order, including additional measures installed or planned to reduce or prevent re-occurrence.

Reporting requirements for Numeric Action Levels (NALs) exceedances are discussed in Section 7.7.2.6.

1.7 ANNUAL REPORTING

The General Permit requires all projects that are enrolled for more than one continuous three-month period to submit information and annually certify that their site is in compliance with these requirements. The primary purpose of this requirement is to provide information needed for overall program evaluation and pubic information.

An Annual Report must be completed by September 1 of each year until a NOT has been filed in the SWRCB's SMARTS database. The Contractor is responsible for submitting the Annual Report information to the Contracting Officer's Representative by August 1 of each year for the reporting year of July 1 – June 30. Contractor's Data Submitter shall enter and upload requisite Annual Report information into SMARTS for review and approval by the Contracting Officer's Representative. The Contracting Officer's Representative will review the report information for completeness and accuracy by September 1 of each year. An Annual Report form is available in Appendix E for Contractor's reference.

1.8 CHANGES TO PERMIT COVERAGE

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when: a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought; the SWPPP shall be modified appropriately and shall be documented in the Amendment Log on page 2 of this SWPPP. QSD certification of SWPPP amendments are to be kept in Appendix D. Updated PRDs submitted electronically via SMARTS shall be kept in Appendix F.

1.9 PROJECT CLOSE OUT

The Contractor will contact the Owner within 60 days of project completion. In order to submit the Notice of Termination (NOT), the Contractor will provide the Owner a copy of the SWPPP,

approved implemented SWPPP Site Maps, all documents per Annual Reporting (Section 1.7) submittal requirements, and required photographic evidence showing that the site is ready for filing of the NOT. To terminate coverage under the General Permit, a NOT must be filed in the SWRCBs' SMARTS database. The NOT will be submitted when the following conditions have been met:

- The site will not pose any additional sediment discharge risk than it did prior to the commencement of construction activity.
- There is no potential for construction related stormwater pollution.
- All elements of the SWPPP have been completed and final stabilization has been reached.
- Construction materials and waste have been properly disposed.
- An Annual Report has been filed for project longer than three (3) months.
- The site is in compliance with all local stormwater management requirements.
- The Contracting Officer's Representative prepares and submits the NOT.

Section 2 Project Information

2.1 PROJECT AND SITE DESCRIPTION

2.1.1 Site Description

This Stormwater Pollution Prevention Plan (SWPPP) was prepared for construction activities related to roadway improvements of approximatley 4.4 miles of California State Route (SR) 36 from Humboldt County Milepost (HUM MP) 36.1 to HUM MP 40.5 in Humboldt county, California. The entire project scope comprises approximately 80 acres. The existing impervious area is 15.5 acres (19%) of the total area.

The project begins at approximately 40.453°, -123.654° (HUM MP 36.1) and terminates at approximately 40.489°, -123.627° (HUM MP 40.5).

The project area is characterized by dense forests, steep terrain, and the smal, rural and unincorporated towns of Bridgeville and Dinsmore in Humboldt County. The project is adjacent to the Van Duzen and the Little Van Duzen Rivers.

The project is located in the North Coast Region, which consists of all basins draining into the Pacific Pcean from the California-Oregon State line to the southerly boundary of the watershed of the Estero de San Antonio and Stemple Creek in Martain and Sonoma counties. The poroject area is located within th eEel River Basin, the Van Duzen watershed, as well as the Upper Van Duzen River sub-basin. The Van Duzen River watershed is appproximately 367 square miles and contains 808 miles of streams throughout Humboldt County.

The project location is shown on the Water Pollution Control Drawings included in Appendix B.

2.1.2 Existing Conditions

The project area is a mix of paved roadway with little to no shoulders and wooded slopes. The terrain is steep and forrested, with several reural residences scattered throughout. The area is highly mountainous with elevations approaching 5,900 feet in neighboring areas.

Any historic sources of contamination are described in Section 2.1.4.

2.1.3 Existing Drainage

The project site is within a relatively mountainous area.

Surface drainage generally flows overland, off of the existing roadway and into roadside ditches. Culverts varying in size carry water under the roadway in numerous areas. Seeps, springs, wetlands, roadside swales and streams were all identified within the project are.

Existing site drainage patterns and storm water conveyance systems are shown on Water Pollution Control Drawings in Appendix B.

2.1.4 Historic Sources of Contamination

This site has no historical sources of contamination.

The site is currently a roadway, and will continue to function as such after the project is completed.

2.1.5 Geology and Groundwater

Project area soils are generally well drained sandy clays, based on information received from the USDA Natural Resources Conservation Service Web Soil Survey.

Maintenance and stability issues are ongoing due to the roadway's location in an active landslide area. Landslides have had considerable impacts and require ongoing maintenance.

2.1.6 Project Description

The project consists of the improvements of 4.4 miles of California State Route 36 (SR36). Proposed improvements include realigning and widening SR36 to attain two 12-foot-wide travel lanes with 4-foot-wide paved shoulders. In addition, new signing, pavement delineation, and the accquisitoin of new right of wary are included in the project. The limits of work are shown on Water Pollution Control Drawings in Appendix B. Soils, aggregate materials, and other project materials will be stockpiled as shown on Water Pollution Control Drawings in Appendix B.

2.1.7 Developed Condition

Post construction surface drainage will continue in the same manner as in existing conditions. Drainage will shed off of the roadway into the adjacent roadside ditches and will be conveyed within the ditches to the new and existing road cross culverts.

2.1.8 Construction Quantities

Table 2.1 presents construction site area, percent impervious and curve number, for existing and developed conditions. This information is required to complete site information in the PRDs in SMARTS.

Table 2.1 Construction Site Estimates

Construction site area	85	acres
Disturbed Area	66.5	acres
Percent impervious before construction	40	%
Runoff coefficient before construction	0.756*	
Percent impervious after construction	49	%
Runoff coefficient after construction	0.768*	

*****Runoff coefficient calculated in SMARTS

2.2 PERMITS AND GOVERNING DOCUMENTS

In addition to the General Permit, the following documents have been taken into account while preparing this SWPPP:

Regional Water Quality Control Board requirements – North Coast Region

Basin Plan Requirements

Contract Documents

2.3 STORMWATER RUN-ON FROM OFFSITE AREAS

The project area is within a relatively mountainous area. However, run-on will be captured in existing roadside ditches and will be conveyed through existing culverts as in existing conditions.

2.4 SEDIMENT AND RECEIVING WATER RISK DETERMINATION

A construction site risk assessment has been performed for the project and the resultant risk level for the overall project is Risk Level 3.

The risk level value for K and LS were populated in SMARTS. The risk level R value was calculated per EPA methods and is based on project duration, location, proximity to impaired receiving waters and soil conditions. A copy of the Risk Level calculations to assist in determination for submittal on SMARTS with the PRDs is included in Appendix A.

Table 2.2 summarizes the sediment and receiving water risk factors and document the sources of information used to derive the factors for the Region within which the project lies.

Table 2.2 Summary of Sediment Risk – North Coast Region (1)

RUSLE Factor	**Value**	**Method for establishing value**
R	240	Calculated per EPA methods
K	0.28	Populated in SMARTS
LS	10.26	Populated in SMARTS
Total Predicted Sediment Loss (tons/acre)		**Answer: 689.47 tons/acre**
Overall Sediment Risk Low Sediment Risk < 15 tons/ acre Medium Sediment Risk >= 15 and < 75 tons/acre High Sediment Risk >= 75 tons/acre		☐ **Low** ☐ **Medium** ☒ **High**

Receiving water risk for the site is shown as HIGH per the SMARTS website, resulting in a combined risk factor of 3. Thus, the SWPPP reflects a site risk factor of 3.

The Van Duzen River is currently listed on the 2010 CWA Section 303(d) List for Water Quality Impairments. The Van Duzen River is listed for Sedimentation/Siltation and has an approved TMDL.

Also, the Van Duzen River is currently listed as having beneficial uses including Municipal and Domestic Supply (MUN), Agricultural Supply (AGR), Water Contact Recreation (REC-1), Non-Water Contact Recreation (REC-2), Commercial and Sportfishing (COMM), Spauwning, Reproduction, and Development (SPWN), Wildlife Habitiat (WILD), Aquaculture (AQUA), Cold Water Habitat (COLD), Industrial Service Supply (IND), Migration of Aquatic Organisms (MIGR), and Rare, Threatened or Endangered Species (RARE) (*Water Quality Control Plan for the Noth Coast Region* by California Regional Water Quality Control Board, North Coast Region, Amended December 2005).

Risk Level 3 sites are subject to both the narrative effluent limitations and numeric effluent standards. The narrative effluent limitations require stormwater discharges associated with construction activity to minimize or prevent pollutants in stormwater and authorized non-stormwater through the use of controls, structures and best management practices. Discharges from Risk Level 3 site are subject to Numeric Action Levels (NAL) for pH and turbidity shown in Table 2-3. This SWPPP has been prepared to address Risk Level 3 requirements (General Permit Attachment D).

Table 2.3 Numeric Action Levels

Parameter	**Unit**	**Numeric Action Level Daily Average**
pH	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	NTU	250 NTU

2.5 CONSTRUCTION SCHEDULE

The site sediment risk was determined based on construction taking place between Septermber 2016 and November 2018. Modification or extension of the schedule (start and end dates) may affect risk determination and permit requirements. The Contractor shall contact the Contracting Officer's Representative or LRP and the QSD immediately if the schedule changes and the Contracting Officer's Representative or LRP and its QSD will assess potential impacts to the SWPPP. The estimated schedule for planned work can be found in Appendix G.

Table 2.4 Construction Activity Milestones*

Milestone	**Start Date**	**End Date**
Date PRDs and filing fee submitted to SWRCB.		Nov 2016
Project covered by General Construction Permit. A construction site is covered by the General Permit upon filing PRDs, fees and receipt of WDID number.	September 2016	November 2018
Initial ground-breaking (must occur after completion of SWPPP and receipt of WDID).	Nov 2016	
Implement erosion control measures	Nov 2016	
Implement sediment control measures (perimeter control, stabilized entrance, inlet protection).	Nov 2016	
Grading/excavation/trenching activities.	May 2017	
Paving activities.	TBD	TBD
Construction of structures and paved surfaces.	TBD	TBD
Site clean-up.		TBD
Anticipated construction completion date.		November 2018
Anticipated filing of Notice of Termination (NOT).		November 2019

**All dates approximate*

2.6 POTENTIAL CONSTRUCTION ACTIVITY AND POLLUTANT SOURCES

Appendix H includes a list of construction activities and associated materials that are anticipated to be used onsite. These activities and associated materials will or could potentially contribute pollutants, other than sediment, to stormwater runoff.

The anticipated activities and associated pollutants are used in Section 3 to select the BMPs for the project. Location of anticipated pollutants and associated BMPs are show on the Water Pollution Control Drawings in Appendix B.

For sampling requirements for non-visible pollutants associated with construction activity refer to Section 7.7.1. For a full and complete list of onsite pollutants, refer to the Material Safety Data Sheets (MSDS), which are to be retained onsite at the construction trailer.

2.7 IDENTIFICATION OF NON-STORMWATER DISCHARGES

Non-stormwater discharges consist of discharges which do not originate from precipitation events. The General Permit provides allowances for specified non-stormwater discharges that do not cause erosion or carry other pollutants.

Non-stormwater discharges into storm drainage systems or waterways, which are not authorized under the General Permit and listed in the SWPPP, or authorized under a separate NPDES permit, are prohibited.

Non-stormwater discharges that are authorized from this project site include the following:

- Water for dust control
- Groundwater and stormwater dewatering

These authorized non-stormwater discharges will be managed with the stormwater and non-stormwater BMPs described in Section 3 of this SWPPP and will be minimized by the QSP.

Activities at this site that may result in unauthorized non-stormwater discharges include:

- Paving and Grinding Operations
- Vehicle and equipment wash water, including concrete washout water
- Slurries from concrete cutting and coring operations, PCC grinding or AC grinding operations
- Slurries from concrete or mortar mixing operations
- Runoff from dust control applications of water or dst palliatives
- Sanitary and septic wastes
- Chemical leaks and/or spills.

Steps will be taken, including the implementation of appropriate BMPs, to ensure that unauthorized discharges are eliminated, controlled, disposed, or treated on-site.

Discharges of construction materials and wastes, such as fuel or paint, resulting from dumping, spills, or direct contact with rainwater or stormwater runoff, are also prohibited.

2.8 REQUIRED SITE MAP INFORMATION

The construction project's Water Pollution Control Drawings showing the project location, surface water boundaries, geographic features, construction site perimeter and general topography and other requirements identified in Attachment B of the General Permit are located in Appendix B. Table 2.5 identifies the required elements illustrated.

Table 2.5 Required Map Information

Included on WPCD	Required Element
✓	The project's surrounding area (vicinity)
✓	Site layout
✓	Construction site boundaries
✓	Drainage areas
✓	Discharge locations
TBD in field	Sampling locations
✓	Areas of soil disturbance (temporary or permanent)
✓	Active areas of soil disturbance (cut or fill)
✓	Locations of runoff BMPs
✓	Locations of erosion control BMPs
✓	Locations of sediment control BMPs
N/A	Advanced Treatment System (ATS) location (if applicable)
N/A	Locations of sensitive habitats, watercourses, or other features which are not to be disturbed
✓	Locations of all post construction BMPs
✓	Waste storage areas
TBD in field	Vehicle storage areas
✓	Material storage areas
TBD in field	Entrance and Exits
TBD in field	Fueling locations

Section 3 Best Management Practices

3.1 SCHEDULE FOR BMP IMPLEMENTATION

The General Permit recognizes four general phases of construction: (1) Grading and Land Development Phase, (2) Streets and Utilities Phase, (3) Vertical Construction Phase, and (4) Final Landscaping and Site Stabilization Phase. Each phase has activities that can result in different water quality effects from different water quality pollutants. This SWPPP addresses all applicable phases of construction, namely Phase 2 and Phase 4; Phases 1 and 3 are expected to not be applicable to this project.

BMPs for the site are to be implemented and maintained throughout the year on an as-needed basis. BMPs should be implemented in a proactive manner, as appropriate, to protect water quality. The WPCD in Appendix B illustrates general requirements for implementation of BMPs. However, the Contractor's QSD may be required to prepare updated WPCDs as contruction progresses between phases.

Table 3.1 describes the major construction activities that are covered by this SWPPP. The sequence of BMP installation activities for each phase is described.

Table 3.1 BMP Implementation Schedule

	BMP	Implementation	Duration
Erosion Control	Scheduling	Prior to Construction	Entirety of Project
	Preserve existing vegetation	Throughout Construction	Entirety of Project
	Seed, Hydroseed (Final Stabilization)	Where indicated on Contract Drawings	At the completion of grading
	Hydromulch	Where indicated on Contract Drawings	At the completion of grading
Sediment Control	Silt Fence	Prior to construction	Entirety of Project
	Fiber Roll / Sediment Log	In conjunction with construction	Entirety of Project
	Sediment Trap	In conjunction with construction	Entirety of Project
	Check Dam	In conjunction with construction	Entirety of Project
Tracking Control	Street Sweeping	Start of Construction	As needed
Wind Erosion	Wind Erosion Control	Start of Construction	Entirety of Project

Table 3.1 BMP Implementation Schedule

	BMP	Implementation	Duration

3.2 EROSION AND SEDIMENT CONTROL

Erosion and sediment controls are required by the General Permit to provide effective reduction or elimination of sediment related pollutants in stormwater discharges and authorized non-stormwater discharges from the Site. Applicable BMPs are identified in this section for erosion control, sediment control, tracking control, and wind erosion control.

3.2.1 Erosion Control

Erosion control, also referred to as soil stabilization, consists of source control measures that are designed to prevent soil particles from detaching and becoming transported in stormwater runoff. Erosion control BMPs protect the soil surface by covering and/or binding soil particles.

This construction project will implement the following practices to provide effective temporary and final erosion control during construction:

1. Preserve existing vegetation where required and when feasible.
2. The area of soil disturbing operations shall be controlled such that the Contractor is able to implement erosion control BMPs quickly and effectively.
3. Stabilize non-active areas within 14 days of cessation of construction activities.
4. Control erosion in concentrated flow paths by applying check dams or alternate measures such as erosion control blankets, erosion control seeding or other alternate methods.
5. Prior to the completion of construction, apply permanent erosion control to remaining disturbed soil areas.

Sufficient erosion control materials shall be maintained onsite to allow implementation in conformance with this SWPPP.

This SWPPP has been designed to meet the requirements of the General Permit:

Implement effective wind erosion control (D.1).

☒ Yes ☐ N/A

Provide effective soil cover for inactive area and all finished slopes, open space, and utility backfill (D.2).

☒ Yes ☐ N/A

Limit the use of plastic material when more sustainable environmentally friendly alternatives exist (D.3).

☒ Yes ☐ N/A

Specific erosion controls measures to be implemented and maintained at the project site are denoted with an "✓" and described below. BMPs shall be implemented in conformance with the

following guidelines and in accordance with the BMP Fact Sheets provided in Appendix I. If there is a conflict between documents, the WPCDs will prevail over narrative in the body of the SWPPP and over guidance in the BMP Fact Sheets. Site specific details in the WPCDs prevail over standard details included in the BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Erosion Controls
Scheduling (EC-1) ✓ All BMPs shall be in place year-round. Construction activities shall be planned and performed to minimize the area and duration of exposure of soil to erosion by wind, rain, runoff and vehicle tracking. ✓ The area that can be cleared or graded and left exposed at one time will be limited to the amount of acreage that the Contractor can adequately protect prior to a predicted rainstorm. A predicted storm event is defined as a forecasted 50% chance of rain. ✓ Timing of construction will be considered when scheduling work to minimize soil disturbing activities and major grading operations during the rainy season. ✓ Grading of the site will be phased to minimize the total area of exposed soil and the duration of exposure.
Preserve Existing Vegetation (EC-2) ✓ Existing vegetation will be retained **(EC-2)** in undisturbed areas to the extent possible. If possible, vegetative buffer strips will be left adjacent to watercourses and along the site perimeter.
Temporary Soil Stabilization ✓ Temporary vegetation, temporary seeding, and/or hydromulch will be used on disturbed soil areas as a temporary surface cover until soils can be prepared for gravel cover and/or re-vegetation and permanent vegetation is established. **(EC-3, EC-4)**
Dust Control ✓ Wind Erosion Controls **(WE-1)** shall be provided to prevent of alleviate dust generated by construction activities. Care will be taken to prevent over-watering, which may result in runoff or erosion. ✓ Construction roads will be stabilized to prevent tracking of sediments. (TC-2)

The project does anticpate some grading activities, such as the improving roadway safety, improving drainage and clear and grub operations at the road shoulders. All BMPs shall be in place in the areas of work prior to ground disturbance.

Construction activities shall be scheduled and performed to minimize the area and duration of exposure of soil to erosion by wind, rain, runoff and vehicle tracking (EC-1). The area that can be cleared or graded and left exposed at one time is limited to the amount of acreage that the Contractor can adequately protect prior to a predicted rainstorm. A predicted storm event is defined as a forecasted 50% chance of ½-inch of rain. Timing of construction shall be considered when scheduling work to minimize soil-disturbing activities and major grading operations during the rainy season.

The following erosion controls will be implemented at the project construction site:

Vegetation will be preserved to the maximum extent practicable (EC-2). Only areas necessary for construction will be disturbed, cleared, or graded. Areas of vegetation to be protected will be clearly designated as no disturbance areas on the plans, and flagged in the field to exclude construction vehicles. Specific shrubs and trees to be preserved should be clearly marked.

Disturbed areas on the site include removal of existing asphalt cover, clearing and grubbing at the road shoulders, and selective tree removal. Land clearing will be performed to minimize erosion and protect vegetation. Stabilization measures will be placed immediately and will include placement of seed, hydroseed (EC-4), hydromulch (EC-3), and/or permanent gravel cover where indicated in the Contract Drawings. At no time will the site remain disturbed but not stabilized or disturbed but not re-disturbed for 14 calendar days or longer.

Fill slopes shall be constructed in accordance with project specifications.

Wind Erosion Control measures (WE-1) will be used to stabilize soil from wind erosion, and reduce dust generated by construction activities including grading, demolition and travel on unpaved temporary roads. Dust control shall be provided daily or more often by the application of water. Care shall be taken to prevent over-watering, which may result in runoff or erosion.

If water is required to comply with Permit requirements, care will be taken to spray additional areas of exposed soil as necessary during windy periods. Only the minimum amount of water will be used; no runoff will result from this practice.

Locations for specific erosion control measures for the project are included on the Water Pollution Control Drawings contained in Appendix B of this SWPPP.

3.2.2 Sediment Controls

Sediment controls are temporary or permanent structural measures that are intended to complement the selected erosion control measures and reduce sediment discharges from active construction areas. Sediment controls are designed to intercept and settle out soil particles that have been detached and transported by the force of water.

This SWPPP has been designed to meet the requirements of the General Permit:

Establish and maintain effective perimeter controls and stabilize all construction entrances and exits (E.1).

☒ Yes ☐ N/A

Onsite, where sediment basins are used, design sediment basins according to the method provide in the latest update of Fact Sheet SE-2 of the CASQA Construction BMP Hand Book (E.2).

☐ Yes ☒ N/A Though site is comprised of more than 5 acres, the scope of work is primarily in-place milling and reconstruction of existing roadway; grading is limited.

Implement appropriate erosion control BMPs in conjunction with sediment control BMPs for areas under active construction (E.3).

☒ Yes ☐ N/A

Apply linear sediment controls along the toe of the slope, face of the slope and at grade breaks (E.4).

☒ Yes ☐ N/A

Ensure construction activity to and from the site is limited to entrances and exits that employ effective controls to prevent offsite tracking. (E.5).

☒ Yes ☐ N/A

Ensure that all storm drain inlets and perimeter controls, runoff control BMPs and pollutant controls at entrances and exits are maintained and protected from activities that reduces their effectiveness. (E.6).

☒ Yes ☐ N/A

Inspect all access roads daily (E.7).

☒ Yes ☐ N/A

Specific sediment controls measures to be implemented and maintained at the project site are denoted with an "✓" and described below. BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix I. If there is a conflict between documents, the Water Pollution Control Drawings will prevail over narrative in the body of the SWPPP and over guidance in the BMP Fact Sheets. Site specific details in the WPCDs prevail over standard details included in the BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Sediment Controls
Stabilize Perimeter ✓ Before commencing grading or clearing of the site, clearing limits, easements, setbacks, and vegetation to be preserved will be delineated by marking in the field **(**SE-1, **EC-2)** and/or stabilized with non-vegetative controls such as geotextiles (EC-7) [N/A], riprap or gabions (wire mesh boxes filled with rock), and mulches such as straw (EC-6) [N/A]**.** ✓ To prevent transport of sediment into existing storm drain inlets and onto adjacent properties and roadways, before grading or clearing, the site perimeter will be stabilized using controls such as fiber rolls / sediment logs **(SE-5)** or gravel bag berms **(SE-6)**; tracking controls such as stabilized construction entrances (TC-1) [N/A]; storm drain inlets will be protected **(SE-10)**; and sediment traps (if applicable) (SE-3) will be constructed.
Sediment Traps (SE-3) ✓ If needed to comply with Construction General Permit. Temporary sediment traps (temporary basin with a controlled release structure) will be used to reduce sediment prior to entering the storm drain, and around and/or up-slope from storm drain inlet protection measures. [N/A]

Fiber Rolls (SE-5)

- ✓ Fiber rolls (sediment logs) will be used to reduce flow velocity (as slope interrupters or temporary check dams) and provide some removal of sediment, predominantly along the face or toe of erodible slopes and for perimeter sediment control. Fiber rolls are not appropriate as the only BMP at a site and should be used in conjunction with other erosion and sediment control measures to reduce pollutant discharges and shall be maintained by the Contractor for effective sediment control.

Gravel bag berms (SE-6)

- ✓ Gravel bag berms will be used to reduce flow velocity (as slope interrupters or temporary check dams) and provide some removal of sediment. [N/A]
- ✓ Gravel bag barriers will be used for perimeter site control or along streams or channels or around stockpiles to intercept sediment laden sheet flow or moderately concentrated flows.

Tracking Controls

- ✓ A stabilized construction entrance will be used to reduce offsite tracking (TC-1). [N/A]
- ✓ All dirt and debris tracked or transported to offsite paved surfaces will be removed at the end of each work day by manual or mechanical sweeping **(SE-7)**.
- ✓ A wheel wash will be used if offsite tracking cannot be controlled by a stabilized entrance and sweeping (TC-3). [N/A]

Storm Drain Inlet Protection (SE-10)

- ✓ All storm drains in the project area and offsite where inlets can receive flow downstream of sediment tracked from the site will be protected with appropriate storm drain inlet protection such as filter fabrics, block and gravel filters, gravel and wire mesh filters, or gravel bag barriers.

Prior to any ground-disturbing activities, including grading, demolition, or vegetation removal, perimeter protection will be applied. For areas where work is limited to road resurfacing, perimeter protection will be placed as the Work area becomes active. Silt fence or fiber roll traps will be located at outlets, to be determined in the field. For areas in which Work includes grading, a sediment log barrier will be placed around the site perimeter, unless a silt fence is used. Inlet protection will be placed at all storm drain inlets that could receive runoff from the construction site. Vegetative buffers will be maintained wherever possible.

During construction, stormwater runoff shall be directed away from disturbed areas. Properly installed perimeter controls shall be used to limit the discharge of sediment and pollutants from the site, as described below.

Temporary sediment logs, and if necesarry sediment traps, or equivalent measures will be installed along the downhill boundary of the construction site. It is anticipated that the majority of the site will be provided with silt fence and sediment logs.

Perimeter sediment controls, including controls along the physical site perimeter and at active storm drain inlets, and sediment traps, shall be implemented prior to the start of construction and maintained throughout the duration of construction activities.

Locations for specific sediment control measures for the project are included on the Water Pollution Control Drawings contained in Appendix B of this SWPPP.

The construction site will be managed to minimize the amount of dirt, mud, or dust that is generated and can thus be tracked or blown off the site. Because construction is to occur over an existing paved surface, a stabilized construction entrance (TC-1) and wheel wash (TC-3) are not expected to be required. However, Contractor shall monitor the project vicinity at all times and all dirt and/or debris tracked or transported to offsite paved surfaces shall be removed at the end of each workday by hand sweeping or mechanized sweeper. Washing of sediment from the right-of-way shall be prohibited.

Locations for specific tracking control BMPs for the project are included on the Water Pollution Control Drawings contained in Appendix B of this SWPPP.

3.2.3 Drainage Controls

Drainage controls have been selected and designed to effectively manage all run-on and run-off within the site and all run-off that discharges off the site.

This SWPPP has been designed to meet the requirements of the General Permit:

Run-on from offsite shall be directed away from all disturbed area or shall be collectively in compliance with the effluent limitation in the General Permit (F.1).

☒ Yes ☒ N/A

Specific drainage control measures to be implemented and maintained at the project site are denoted with an "✓" and described below. BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix I. If there is a conflict between documents, the Site Map will prevail over narrative in the body of the SWPPP and over guidance in the BMP Fact Sheets. Site specific details in the Site Map prevail over standard details included in the BMP Fact Sheets. The narrative in the body of the SWPPP prevails over guidance in the BMP Fact Sheets.

Outlet Protection (EC-10)

- ❑ Runoff velocities, both on slopes and at discharge points, will be retarded to prevent erosion. [N/A]
- ❑ Rock outlet protection (i.e. rip rap) will be placed at pipe outlets where deemed necessary to prevent scour and reduce the velocity and/or energy of exiting stormwater flows.

To prevent the development of rills and gullies in graded slopes, runoff will be directed to stabilized conveyance channels and drains. No concentrated flow of water will be allowed to flow down a graded slope face.

Every effort will be made to maintain runoff water in its natural course and direction of flow.

Where flow is concentrated into stormwater conveyance systems, they will be designed to reduce scour and erosion. Measures to reduce erosion will include sediment log check dams.

Locations for specific drainage control BMPs for the project are included on the Water Pollution Control Drawings contained in Appendix B of this SWPPP.

3.3 NON-STORMWATER CONTROLS AND WASTE AND MATERIALS MANAGEMENT

3.3.1 Non-Stormwater Controls

Non-stormwater management BMPs involve good housekeeping practices to prevent non-stormwater discharges from entering the storm drain and source control of potential pollutants to prevent them from coming into contact with runoff. Categories of non-stormwater management include paving operations management, pesticide and fertilizer management, vehicle and equipment cleaning, fueling, and maintenance, and painting controls. The selection of non-stormwater BMPs is based on the list of construction activities with a potential for non-stormwater discharges identified in Section 2.7 of this SWPPP.

This SWPPP has been designed to meet the requirements of the General Permit:

Implement good site management measures for Vehicle Storage and Maintenance (B.3).

☒ Yes ☐ N/A

Implement good site management measures for Landscape Materials (B.4).

☒ Yes ☐ N/A

Implement measures to control all non-stormwater discharges (C.1).

☒ Yes ☐ N/A

Shall wash vehicles in such a manner as to prevent non-stormwater discharges to surface waters or MS4 drainage systems (C.2).

☐ Yes ☒ N/A Wash vehicles at appropriate off-site locations.

Shall clean streets in such a manner as to prevent unauthorized non-stormwater discharges from reaching surface water or MS4 drainage systems (C.3).

☒ Yes ☐ N/A

Specific non-stormwater measures to be implemented and maintained at the project site are denoted with an "✓" and described below. Fact Sheets for temporary non-stormwater BMPs are provided in Appendix I.

Paving and Grinding Operations (NS-3)

- ✓ Saw-cut slurry will be shoveled, vacuumed and removed from site.
- ✓ Storm drains inlets / culverts will be covered or barricaded and runoff and run-on diverted during saw cutting, paving or grinding operations.
- ✓ Paving materials and machinery will be stored away from storm drains and water bodies.
- ✓ Secondary containment will be used to catch drips, leaks or spills where applicable.
- ✓ Paving will not take place within 24 hours of a predicted storm event or during rainfall.
- ✓ Excess materials (e.g. asphalt, concrete) will be collected, properly stored, and then disposed upon completion of paving operations.

Pesticide and Fertilizer Use [N/A]

- ❑ Only trained personnel, certified in accordance with federal and state regulations, will perform pesticide application.
- ❑ Recommended usage instructions will be followed for application of pesticides, herbicides and fertilizers.
- ❑ Herbicides and pesticides will not be over applied. Only the amount needed will be prepared.
- ❑ Application of pesticides, fertilizers and herbicides will be avoided when precipitation is forecasted and will be prohibited during precipitation events.
- ❑ Fertilizers will be applied in multiple smaller applications, as opposed to one large application.
- ❑ Vegetative debris will be disposed as green waste or solid waste.

Vehicle and Equipment Cleaning (NS-8) [N/A]

- ❑ All vehicle, equipment, and machinery washing will be done offsite at commercial wash facilities or at a facility that is properly permitted and discharges wash water to a recycle/reuse system or to the sanitary sewer. On-site vehicle and equipment cleaning is prohibited unless approved by Owner (NOTE: Requires revision to Project SWPPP).

Vehicle and Equipment Fueling (NS-9) and Maintenance (NS-10) [N/A]

- ✓ Vehicle and equipment fueling may be conducted on-site with appropriate measures for spill prevention and containment.
- ❑ All vehicle and equipment maintenance will be conducted offsite unless approved by Owner (NOTE: Requires revision to Project SWPPP).

Paving and Grinding Operations

In order to reduce the potential for the transport of pollutants in stormwater runoff from paving operations, paving shall be rescheduled if rain is forecasted. If paving is scheduled to occur within 72 hours of a storm event, catch basin filters or other appropriate BMPs will be utilized to trap hydrocarbons.

Any pavement cutting waste, generated by pavement cutting activities, shall be vacuumed up and disposed of immediately (NS-3).

Pesticide and Fertilizer Use

The use of pesticides and fertilizers is not anticipated at this site.

Vehicle and Equipment Cleaning, Fueling and Maintenance

Vehicles and heavy machinery are a potential source of pollutants such as petroleum products, antifreeze, and exhaust and waste oil containing heavy metals. Pollutants may enter stormwater runoff by means of direct contact with machine parts and by contact with spills on surfaces and the ground. On-site vehicle and equipment fueling will be permitted; however, appropriate measures for spill prevention and containment must be available on-site at all times and be

implemetned whenever equipment is being fueled. Vehicle and equipment maintenance are prohibited unless specific provisions to contain and dispose of fluid drips and spills are implemented and approved by Owner and subsequently updated in the SWPPP.

3.3.2 Materials Management and Waste Management

Materials management control practices consist of implementing procedural and structural BMPs for handling, storing and using construction materials to prevent the release of those materials into stormwater discharges. The amount and type of construction materials to be utilized at the Site will depend upon the type of construction and the length of the construction period. The materials may be used continuously, such as fuel for vehicles and equipment, or the materials may be used for a discrete period, such as soil binders for temporary stabilization.

Waste management consist of implementing procedural and structural BMPs for handling, storing and ensuring proper disposal of wastes to prevent the release of those wastes into stormwater discharges.

Materials and waste management pollution control BMPs shall be implemented to minimize stormwater contact with construction materials, wastes and service areas; and to prevent materials and wastes from being discharged offsite. The primary mechanisms for stormwater contact that shall be addressed include:

- Direct contact with precipitation.
- Contact with stormwater run-on and runoff.
- Wind dispersion of loose materials.
- Direct discharge to the storm drain system through spills or dumping.
- Extended contact with some materials and wastes, such as asphalt cold mix and treated wood products, which can leach pollutants into stormwater.

This SWPPP has been designed to meet the requirements of the General Permit:

Implement good site management measures for Construction Material that could potentially be a threat to water quality if discharge (B.1).

☒ Yes ☐ N/A

Implement good site management measures for Waste Management (B.2).

☒ Yes ☐ N/A

Specific material management and waste management control measures to be implemented and maintained at the project site are denoted with an "✓" and described below. BMPs shall be implemented in conformance with the following guidelines and in accordance with the BMP Fact Sheets provided in Appendix I.

Materials Delivery and Storage (WM-1)

- ✓ Designate areas of the construction site for material delivery and storage. Material storage areas will be placed near construction site entrances, away from drain inlets, culverts and surface water bodies.
- ✓ Designated storage areas will be kept clean and well organized.
- ✓ Any materials being stored which could release pollutants by wind or runoff transport shall be protected by overhead cover, secondary containment, tarpaulins, or other appropriate method.
- ✓ Regular inspections of storage areas will be conducted to monitor inventory and check for leaking containers.
- ✓ Any chemicals, drums or bagged materials not stored in a covered location, will be stored on pallets, and when possible in secondary containment.
- ✓ Secondary containment will be provided for liquids.
- ✓ Secondary containment areas will be covered to prevent accumulation of rainwater.

Materials Use (WM-2)

- ✓ Materials will be used in accordance with manufacturer directions and in a manner to prevent release of pollutants.
- ✓ An accurate, up-to-date inventory of materials delivered and stored on-site will be kept on-site or with the Contractor's site superintendent.
- ❑ Application of any erodible landscape material will be discontinued 2 days prior to a forecasted rain event or during periods of precipitation. [N/A]

Use of Paint Materials (WM-2)

- ✓ Painting equipment and materials or any other chemical-holding containers will not be rinsed or cleaned onto dirt, stone or paved areas of the site, or into streets, gutters, storm drains, or drainage channels (natural or man-made). Water-based paints will be rinsed into waste buckets to be disposed to the sanitary sewer (offsite). Excess oil-based paints and sludge will be disposed in accordance with applicable waste regulations.
- ✓ All paints will be stored in a covered storage area.
- ✓ Painting will not be conducted during rain events.
- ❑ Painting operations will be properly enclosed or covered to avoid drift. [N/A]
- ✓ Air quality and OSHA standards for wind drift while painting will be followed.
- ✓ Paint will be mixed in a containment area.

Stockpile Management (WM-3)

- ✓ Stockpiles will be covered or protected by soil stabilization measures when not in use and at the end of each day throughout the term of the contract **(WM-3)**. Stockpiles shall be protected with temporary perimeter sediment barriers.

Spill Prevention and Control (WM-4)

- ✓ If a spill were to occur at the site, it will never be cleaned-up by hosing off the area. Dry material spills will never be hosed down or buried.
- ✓ Any fuel products, lubricating fluids, grease or other products and/or waste released from the Contractor's vehicles, equipment, or operations shall be collected and disposed of immediately in accordance with State, Federal and local laws.
- ✓ If the spill has occurred during a rain event, the area will be covered as quickly as possible. The spill will be cleaned up as soon as possible after cessation of rain.
- ✓ Spill cleanup materials will be stored near potential spill areas (e.g., painting, vehicle maintenance areas).

Solid Waste Management (WM-5)

- ✓ There will be designated temporary waste storage areas on the site.
- ✓ The site will be kept clean of litter and waste.
- ✓ Non-hazardous construction wastes (e.g., vegetation, trash, and construction debris) will be collected from throughout the site regularly and deposited at the designated waste storage areas. Additional containers and more frequent pickup will be provided during the demolition phase of construction.
- ✓ Non-hazardous site wastes will be stored within covered, water-tight dumpsters and/or containers that prevent exposure to rain and prevent loss of wastes when it is windy.
- ✓ All waste materials will be removed from the storage areas by the Contractor or a licensed subcontractor on a weekly basis and disposed or recycled in accordance with all Federal, State, and local regulations.
- ✓ Dumpsters will not be hosed out on the construction site. Any required dumpster cleaning will be done offsite by the trash hauling Contractor.
- ✓ Any solid waste that accumulates at erosion and sediment control devices will be removed immediately.
- ✓ Dumpsters shall be closed at the end of every business day and during rain event.

Sanitary/Septic Control Measures (WM-9)

- ✓ Portable sanitary facilities will be transported to and from the site by a licensed Contractor, placed in a convenient location a minimum of 50' from any storm drain inlet, include a pan beneath, and be maintained in good working order by a licensed service.
- ✓ Untreated wastewater will never be discharged to surface waters or on-site storm drains and will never be buried.

Hazardous Materials Management (WM-1)

- ✓ Storage of hazardous materials on site will be minimized. Any hazardous materials generated during construction will be containerized and kept closed during work activities.
- ✓ Hazardous materials will be stored in covered, sealed containers within a bermed storage area. Lids alone will not be considered adequate cover.
- ✓ Bermed storage area will be covered.
- ✓ Designate areas of the construction site for hazardous material delivery and storage. Material storage areas will be placed near construction site entrances, away from drain inlets, culverts and surface water bodies.
- ✓ Designated storage areas will be kept clean and well organized.
- ✓ The following types of materials will be stored in a covered storage area: fuels, oil, grease, paints, solvents, curing compounds materials, and other similar materials that could be considered potential pollutants in stormwater discharge.
- ✓ Regular inspections of storage areas will be conducted to monitor inventory and check for leaking containers

Hazardous Waste Management (WM-6)

- ✓ Hazardous wastes and containers will be placed in a designated hazardous waste storage area that is covered and has an impermeable bottom surface surrounded by secondary containment to minimize the mixing of wastes with stormwater and to prevent the direct release of liquid waste to stormwater. The temporary storage and removal of hazardous wastes from the site will be in accordance with all applicable state and federal laws.
- ✓ Wastes will be segregated and recycled where feasible (e.g., paints, solvents, used oil, batteries, anti-freeze). Wastes will not be mixed since this can cause chemical reactions, will make recycling impossible and complicate disposal.
- ✓ Covered waste bins will be designated for the disposal of all empty product (e.g., paints, solvents, glues, petroleum products, concrete, exterior finishes, pesticides, fertilizers, etc.) containers. The original product label will not be removed as it contains important safety and disposal information.
- ✓ Toxic wastes and chemicals will not be disposed of in dumpsters designated for construction debris.
- ✓ Universal waste shall be handled and disposed of in accordance with applicable local, State and Federal regulation.
- ✓ Employees and subcontractors will be trained on proper storage practices

Concrete Waste Management (WM-8)

- ✓ No raw cement materials will be stored on site.
- ✓ Concrete trucks and transfer chutes will be washed-out on-site utilizing a concrete washout to collect all washwater and concrete waste. The washout area will be located away from storm drains, open ditches or water bodies.
- ✓ No concrete washout water or concrete sawcutting wastewater will be discharged offsite.
- ✓ Gravel bags will be used to prevent offsite discharge of saw-cut slurry and sediment will be cleaned up when dry.
- ✓ On a regular basis during concrete work, solid concrete that has accumulated on-site will be broken up, removed and hauled away. Washing of fresh concrete will be avoided to the extent possible. Washout must be water-tight.
- ✓ Excess concrete will not be dumped on-site, except in designated areas.
- ✓ Sweepings from exposed aggregate concrete will not be washed into the street or storm drain. The sweepings will be collected and returned to the aggregate stockpile or disposed in the trash.
- ✓ Employees and subcontractors will be trained in proper concrete waste management.

Many materials used in construction can contribute pollutants to stormwater runoff. Examples of such materials include vehicle fuels, oils, and antifreeze. Any materials being stored which could release constituents by wind or runoff transport shall be protected by overhead cover, secondary containment, tarpaulins, or other methods approved by the Engineer. All construction materials will be delivered to and stored in designated areas at the construction site (WM-1). The main loading, unloading, and access areas should be located away from storm drain inlets and channels. The Contractor will construct enclosures or flow barriers (berms) around these areas to prevent stormwater flows from entering storm drains or receiving waters, and to control the discharge of sediments and other pollutants.

Material Use

All hazardous material will be stored in covered, sealed containers, within a bermed area. The bermed storage area will be covered to prevent contact with stormwater.

Stockpiles

Stockpiles will be covered or protected by soil stabilization measures when not in use and at the end of each day throughout the term of the contract (WM-3). Stockpiles shall be protected with temporary perimeter sediment barriers.

Spill Prevention and Control

Measures will be undertaken at the site to prevent or reduce the discharge of pollutants to stormwater from leaks and spills by reducing the chance for spills, stopping the source of spills, containing and cleaning up spills, properly disposing of spill materials, and training employees.

Spill equipment will be located in an area designated by the Contractor and acceptable to the Owner.

In the event of a spill, follow reporting procedures presented in Section 3.3.3.

Waste Management

There will be designated temporary waste storage areas on the site. The sites will be contained within gravel bag berms or other perimeter controls. Non-hazardous construction wastes (e.g., vegetation, trash, and construction debris) will be collected from throughout the site once a day and deposited in central piles at the designated waste storage areas. When practical, wastes will be stored within covered dumpsters. All waste materials will be removed from the storage areas by the Contractor or a licensed subcontractor on a weekly basis and transported to an offsite landfill or to the appropriate recycling facility. The disposal of excess material offsite will comply with all Federal, State, and local regulations.

Compliance with State/Local Sanitary Waste Regulations

The following measures will be implemented to ensure compliance with local, State and Federal waste disposal, sanitary sewer or septic system regulations:

- Portable sanitary facilities will be transported to and from the site by a licensed Contractor, placed in a convenient location and maintained in good working order by a licensed service.
- Untreated wastewater will never be discharged to surface waters or on-site storm drains and will never be buried.

Hazardous Materials and Waste Management

BMPs will be implemented to minimize or eliminate the discharge of pollutants from construction site hazardous waste and materials to the storm drain system or to watercourses (e.g. store within bermed and covered area).

Contaminated Soil Management

A number of practices occurring during construction may lead to contamination of soils. For example, leaks and spills of petroleum products from leaking vehicles and routine vehicle and equipment maintenance can cause soil contamination or areas of historic contamination may be encountered. All contaminated soils resulting from vehicle leaks or maintenance must be removed and disposed of correctly (WM-7). No contaminated soils shall be buried or otherwise disposed on site.

Concrete Waste Management

Whenever possible, concrete trucks will be washed-out offsite in designated areas. If washout must occur on site, concrete washout facilities shall be provided and properly maintained by the Contractor. Facilities shall be maintained with a minimum 12” freeboard and cleaned or replaced when the washout is 75% full. No overflow from concrete washouts is permitted to runoff the site. Upon completion of the concrete work, the concrete will be broken up, removed, and reused on site or hauled away (WM-8). Washing of fresh concrete will be avoided, unless runoff can be drained to a bermed or level area, away from storm drain inlets and channels.

3.3.3 Spill Reponses and Reporting Procedures

Proper disposal of all spill cleanup material will be done within 24 hours of the incident.

Non-Stormwater Discharges

All non-stormwater discharges that enter a storm drain shall be immediately abated and cleaned. Notification of the spill is to be made to the LRP at 720.963.3595. Sampling of non-stormwater shall be in accordance with the CSMP Section 7.7.3. Documentation of the non-stormwater release and response activities will be recorded on "Quarterly Visual Observation of Non-Stormwater Discharges" Form in Appendix J.

Sewage and Petroleum Discharges

All sewage or petroleum spills that enter a storm drain and are not fully contained, or spills 5 gallons or greater of potentially hazardous materials, and/or any spill of hazardous material of Federal Reportable Quantity (as established under 40 CFR Parts 110, 117, or 302), shall be documented in Table 3.2 and the Contractor shall notify the LRP at 720.963.3595 who will notify the National Response Center by telephone at (800) 424-8802, if appropriate. The Contractor will submit a written description of the release to EPA Region 9, including the date, circumstances of the incident, and steps taken to prevent another release within 14 days, if a Federal Reportable Release occurred. A copy of this report is to be submitted to the Owner.

SWPPP Reportable Quantity Releases

This table will be completed for any release of petroleum products or sewage that enters a storm drain and are not fully contained; any release 5 gallons or greater of potentially hazardous material, and/or any Reportable Quantity spill of hazardous materials (as established under 40 CFR Part 110, 40 CFR Part 117, or 40 CFR 302) that occurs on site.

1. 40 CFR Part 110 addresses the discharge of oil in such quantities as may be harmful pursuant to Section 311(b)(4) of the Clean Water Act.
2. 40 CFR Part 117 addresses the determination of such quantities of hazardous substances that may be harmful pursuant to Section 311(b)(3) of the Clean Water Act.
3. 40 CFR Part 302 addresses the designation, reportable quantities, and notification requirements for the release of substances designated under Section 311(b)(2)(A) of the Clean Water Act.

Table 3.2 Spill Quantities

Date of Spill	Material Spilled	Approximate Quantity	Agencies Notified	Date Notified

3.4 POST CONSTRUCTION STORMWATER MANAGEMENT MEASURES

Post construction BMPs are permanent measures installed during construction, designed to reduce or eliminate pollutant discharges from the site after construction is completed in accordance with North Coast Regional Permits and as detailed in the Stormwater Control plans in the Construction Documents.

Proper operation and maintenance will be implemented by the Owner for permanent structural BMPs so that they continue to function as designed. This is especially important for treatment controls (e.g., on-site retention or detention basins, vegetated swales, catch basin filters or inserts), since their routine maintenance involves activities such as sediment removal, vegetation management, and replacement of filters or inserts.

A plan for post construction BMP funding and maintenance has been developed to address at minimum five years following construction. The post construction BMPs that are described will be included in the project.

Post Construction Site Design BMP

Minimizing Impervious Areas ❑ Incorporate landscaped buffer areas between sidewalks and streets. [N/A] ❑ Reduce overall imperviousness associated with parking lots by providing compact car spaces, minimizing stall dimensions, incorporating efficient parking lanes, and using vegetated planter strips. [N/A]
Increase Rainfall Infiltration ❑ Direct rooftop runoff to pervious areas such as yards, open channels, or vegetated areas, and avoid routing rooftop runoff to the roadway or the urban runoff conveyance system. [N/A]
Maximize Rainfall Interception ✓ Maximizing canopy interception and water conservation by preserving existing native trees and shrubs, and planting additional native or drought tolerant trees and large shrubs.
Minimize Directly Connected Impervious Areas (DCIAs) ✓ Draining rooftops/roadways into adjacent landscaping prior to discharging to the storm drain. ✓ Draining parking lots into landscape areas co-designed as biofiltration areas.
Slope and Channel Protection ✓ Energy dissipaters, such as riprap, at the outlets of new storm drains, culverts, conduits, or channels that enter unlined channels.

Post Construction Source Control BMPs

✓ Storm drain system stenciling and signage. [N/A]
✓ Landscape Irrigation Controls. [N/A]
✓ Drain inlet inserts. [N/A]
Public Education ✓ Good housekeeping practices (proper waste disposal, etc.).
✓ Landscape Irrigation Controls. [N/A]

Section 4 BMP Inspection, Maintenance, and Rain Event Action Plans

4.1 BMP INSPECTION AND MAINTENANCE

The General Permit requires routine weekly inspections of BMPs, along with inspections before, during, and after qualifying rain events. The construction general permit defines a qualifying rain events as an event that produces ½ inch or more precipiation with a 48 hour or greater dry period between events. A BMP inspection checklist must be filled out for inspections and maintained on-site with the SWPPP. Refer to Construction Site Monitoring Plan (Section 7) for rain event inspection information. The inspection checklist includes the necessary information covered in Section 7.6. Inspection and monitoring records shall be kept in Appendix J.

BMPs shall be maintained regularly to ensure proper and effective functionality. If necessary, corrective actions shall be begin within 72 hours of identified deficiencies and associated amendments to the SWPPP shall be prepared by the QSD.

Specific details for maintenance, inspection, and repair of BMPs selected for this Site can be found in the BMP Factsheets in Appendix I.

4.2 RAIN EVENT ACTION PLANS

The Rain Event Action Plans (REAP) is written document designed to be used as a planning tool by the QSP to protect disturbed portions of the Site and to ensure that adequate materials and staff are available to implement erosion and sediment control measures. It is the responsibility of the QSP to be aware of precipitation forecast and to obtain and print copies of forecasted precipitation from NOAA's National Weather Service Forecast Office (www.srh.noaa.gov).

A REAP template for each applicable project phase can be found in Appendix K. The QSP shall customize these templates for each rain event and project phase when the the project is under construction. The QSP shall maintain a paper copy of completed REAPs in compliance with the record retention requirements Section 1.5 of this SWPPP. Completed REAPs shall be maintained in Appendix K.

The QSP will develop the event-specific REAP 48 hours prior to precipitation event forecast to have a 50% or greater chance of producing precipitation in the project area. The REAP will be maintained onsite and be implemented 24 hours in advance of the predicted precipitation event.

At a minimum, the REAP will include the following site and phase-specific information:

- Site Address;
- Calculated Risk Level (Level 3);
- Site Stormwater Manager Information including the name, company and 24-hour emergency telephone number;
- Erosion and Sediment Control Provider information including the name, company and 24-hour emergency telephone number;
- Stormwater Sampling Agent information including the name, company, and 24-hour emergency telephone number;

- Activities associated with each construction phase;
- Trades active on the construction site during each construction phase;
- Trade Contractor information; and
- Recommended actions for each project phase.

Section 5 Training

Appendix M identifies the QSP(s) for the project. To promote stormwater management awareness specific for this project, periodic training of job-site personnel shall be included as part of routine project meetings (e.g. daily/weekly tailgate safety meetings), or task specific trainings as needed.

The QSP shall be responsible for providing this information at the meetings, and subsequently completing the training logs shown in Appendix L, which identifies the site-specific stormwater topics covered as well as the names of site personnel who attended the meeting. Tasks may be delegated to trained employees by the QSP provided adequate supervision and oversight is provided. Training shall correspond to the specific task delegated including: SWPPP implementation; BMP inspection and maintenance; and record keeping.

Documentation of training activities (formal and informal) is to be retained in SWPPP Appendix L.

Section 6 Responsible Parties and Operators

6.1 RESPONSIBLE PARTIES

Approved Signatory:

Approved Signatory(ies) who are responsible for SWPPP implementation and have authority to sign permit-related documents are identified in Appendix M. Written authorizations from the Owner for these individuals are provided in Appendix M.

Data Submitters:

Data Submitters who are responsible for SMARTS updates are listed in Appendix M.

Qualified SWPPP Practitioner:

The QSP shall ensure that all BMPs required by the General Permit and this SWPPP are implemented. In general the QSP is responsible for non-stormwater and stormwater visual observations, sampling and analysis. The QSP contact information and responsibilities for this project are listed below. Note: A QSD can serve the role of the QSP also. The QSP(s) are indentified in Appendix M.

Responsibilities

- Responsible for overall SWPPP implementation, ensuring that materials and manpower are made available for the successful maintenance of all erosion and sediment control and other BMPs specified in the SWPPP.
- Responsible for maintaining an up-to-date copy of this SWPPP onsite at all times, from commencement of construction to final site stabilization.
- Responsible for making a copy of the SWPPP available for inspection by outside authorized regulatory authorities upon request.
- Responsible for ensuring that field engineering activities are planned and conducted in accordance with the SWPPP.
- Responsible for directing ongoing regular BMP maintenance activities (e.g. silt fence repair, fiber roll / sediment log replacement, sediment removal, timely waste disposal, etc).
- Responsible for implementing and overseeing necessary corrective actions to the erosion/sediment control devices and other BMPs identified during regular site inspections.
- Responsible for maintaining all site records pertaining to inspection and maintenance of erosion and sediment controls and other BMPs as well as records detailing the dates on which major construction activities began and were completed.
- Responsible for conducting Environmental Awareness Training for site personnel (including subcontractor personnel). This involves increasing awareness of the need to comply with the SWPPP which includes: minimizing sediment in stormwater

discharges offsite as well as keeping a clean site and minimizing the potential for construction materials and wastes from entering stormwater discharges.

- Responsible for conducting regular documented inspections of erosion and sediment control devices and other BMPs contained in this SWPPP (as discussed in Section 4.0). The findings of these inspections are discussed with the Project Field Engineer who in turn makes available the necessary resources to repair/replace any defective control devices identified in the inspection.
- Responsible for acting as the site spill coordinator to document spills, direct clean-up activities, minimize impact to stormwater, and ensure that the proper reporting, if necessary, is completed.
- Responsible for ensuring that all subcontractors involved with construction activities, which may potentially affect stormwater quality at the site, are made aware of, and their contracts reflect that they must comply with the applicable provisions of this SWPPP.

6.2 CONTRACTOR LIST

Appendix N includes a list of all Contractors, subcontractors and individuals that will be directed by the QSP for activities covered under this SWPPP. At a minimum the following information shall be included:

- Name
- Title
- Company
- Address
- Phone Number
- Number (24/7)

Section 7 Construction Site Monitoring Program

7.1 Purpose

This Construction Site Monitoring Program was developed to address the following objectives:

1. To demonstrate that the project site is in compliance with the Discharge Prohibitions and applicable Numeric Action Levels (NALs) of the Construction General Permit;
2. To determine whether non-visible pollutants are present at the construction site and are causing or contributing to exceedances of water quality objectives;
3. To determine whether immediate corrective actions, additional Best Management Practices (BMP) implementation, or SWPPP revisions are necessary to reduce pollutants in stormwater discharges and authorized non-stormwater discharges; and
4. To determine whether BMPs included in the SWPPP and REAP are effective in preventing or reducing pollutants in stormwater discharges and authorized non-stormwater discharges.

7.2 Applicability of Permit Requirements

This project has been determined to be a Risk Level 3 project. The General Permit identifies the following types of monitoring as being applicable for a Risk Level 3 project.

Risk Level 2

- Visual inspections of BMPs;
- Visual monitoring of the site related to qualifying storm events;
- Visual monitoring of the site for non-stormwater discharges;
- Sampling and analysis of construction site runoff for pH and turbidity;
- Sampling and analysis of construction site runoff for non-visible pollutants when applicable;
- Sampling and analysis of non-stormwater discharges when applicable.
- Sampling and analysis of construction site runoff for other parameters if applicable;
- Bioassessment monitoring if applicable.

7.3 Weather and Rain Event Tracking

Visual monitoring, inspections, and sampling requirements of the General Permit are triggered by a qualifying rain event. The General Permit defines a qualifying rain event as any event that produces ½ inch of precipitation. A minimum of 48 hours of dry weather will be used to distinguish between separate qualifying storm events.

7.3.1 Weather Tracking

The QSP should consult daily the National Oceanographic and Atmospheric Administration (NOAA) for the weather forecasts. These forecasts can be obtained at http://www.srh.noaa.gov/.

Weather reports should be printed and maintained with the SWPPP in Appendix K "Weather Reports and REAP". If rain is forecasted the QSP shall perform a Pre-Rain Event "BMP Inspection Report", a template of which is included in Appendix J.

7.3.2 Rain Gauges

Contractor shall provide a rain gauge at the project site for data collection.

Rain gauge data shall be collected daily during normal site scheduled hours. If there is precipitation, the QSP shall perform a During-Rain Event "BMP Inspection Report", included in Appendix J. The rain gauge should be read at approximately the same time every day and the date and time of each reading recorded. Log rain gauge readings in Appendix K "Weather Reports and REAP".

If total rainfall is greater than ½ inch, the QSP shall prepare a Post-Rain Event "BMP Inspection Report" within 48 hours of the conclusion of the storm, included in Appendix J.

7.4 Monitoring Location and Personnel

Monitoring locations are described in the Sections 7.6 and 7.7.

Whenever changes in the construction site might affect the appropriateness of sampling locations, the sampling locations shall be revised accordingly. All such revisions shall be implemented as soon as feasible and the SWPPP amended. Temporary changes that result in a one-time additional sampling location do not require a SWPPP amendment.

The QSP or his/her designee will contact their contracted laboratory or environmental consultant 24 hours prior to a predicted rain event or for an unpredicted event, as soon as a rain event begins to ensure that adequate sample collection personnel, supplies for monitoring pH and turbidity are available and will be mobilized to collect samples on the project site in accordance with the sampling schedule.

Samples will be collected and analyzed by:

Contractor	☒ Yes	☐ No	OR
Consultant	☒ Yes	☐ No	OR
Laboratory	☒ Yes	☐ No	

If collected by the Contractor, samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number: _____

Alternate(s)/Telephone Number: _____

If collected by a Laboratory or Environmental Consultant, samples on the project site will be collected by the following:

Company Name: _____

Street Address: _____

City, State, Zip: _____

Telephone Number: _____

Point of Contact: _____

Name of Sampler(s): _____

7.5 Safety and Monitoring Exemptions

Safety practices for sample collection will be in accordance with the Contractor's health and safety plan for the project.

This project is not required to collect samples or conduct visual observations (inspections) under the following conditions:

- During dangerous weather conditions such as flooding and electrical storms.
- Outside of scheduled site business hours.

Scheduled site business hours are to be determined during the pre-construction meeting:

Contractor to Add _____

(Days) (Times)

If monitoring (visual monitoring or sample collection) of the site is unsafe because of the dangerous conditions noted above then the QSP shall document the conditions why an exception to performing the monitoring was necessary. The exemption documentation shall be filed in Appendix J.

7.6 Visual Monitoring

Visual monitoring includes observations and inspections. Inspections of BMPs are required to identify and record BMPs that need maintenance to operate effectively, that have failed, or that could fail to operate as intended. Visual observations of the site are required to observe stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources.

Table 7.1 identifies the required frequency of visual observations and inspections. Inspections and observations will be conducted at the locations identified in Section 7.6.5.

Table 7.1 Summary of Visual Monitoring and Inspections

Type of Inspection	Frequency
Routine Inspections	
BMP Inspections	Weekly[1]
BMP Inspections – Tracking Control	Daily
Non-Stormwater Discharge Observations	Quarterly during daylight hours
Rain Event Triggered Inspections	
Site Inspections Prior to a Qualifying Event	Within 48 hours prior to qualifying event[2]
BMP Inspections During an Extended Storm Event	Every 24-hour period of a rain event[2,3]
Site Inspections Following a Qualifying Event	Within 48 hours following a qualifying event[2]

[1] Most BMPs must be inspected weekly; those identified below must be inspected more frequently.
[2] Inspections are only required during scheduled site operating hours.

Table 7.1 Summary of Visual Monitoring and Inspections

Type of Inspection	Frequency
[3] These inspections are required daily regardless of the amount of precipitation.	

7.6.1 Routine Observations and Inspections

Routine site inspections and visual monitoring are necessary to ensure that the project is in compliance with the requirements of the Construction General Permit.

7.6.1.1 Routine BMP Inspections

Inspections of BMPs are conducted to identify and record:

- BMPs that are properly installed and maintained;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed;
- BMPs that could fail to operate as intended; or
- BMP's previously identified as requiring maintenances have been repaired or replaced.

7.6.1.2 Non-Stormwater Discharge Observations

Each drainage area will be inspected quarterly for the presence of or indications of prior unauthorized and authorized non-stormwater discharges. Inspections will record:

- Presence or evidence of any non-stormwater discharge (authorized or unauthorized);
- Pollutant characteristics (floating and suspended material, sheen, discoloration, turbidity, odor, etc); and
- Source of discharge.

7.6.2 Rain-Event Triggered Observations and Inspections

Visual observations of the site and inspections of BMPs are required prior to a qualifying rain event, following a qualifying rain event, and every 24-hour period during a qualifying rain event. Pre-rain inspections will be conducted after consulting NOAA and determining that a precipitation event with a 50% or greater probability of precipitation has been predicted.

7.6.2.1 Visual Observations Prior to a Forecasted Qualifying Rain Event

Within 48-hours prior to a qualifying event a stormwater visual monitoring site inspection and observations shall be conducted at the following locations:

- Potential pollutant sources are properly stored (i.e. sorted in covered areas, elevated off ground surfaces, etc);
- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;

- BMPs to identify if they have been properly implemented or require maintenance;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard.

7.6.2.2 BMP Inspections During an Extended Storm Event

During an extended rain event BMP inspections will be conducted every 24 hours during normal business hours to identify and record:

- Stormwater drainage areas to identify any spills, leaks, or uncontrolled pollutant sources;
- Evidence of any spills, leaks, or uncontrolled pollutant sources that may have migrated offsite;
- BMPs that are properly installed;
- BMPs that need maintenance to operate effectively;
- BMPs that have failed; or
- BMPs that could fail to operate as intended.

If the construction site is not accessible during the rain event, the visual inspections shall be performed at all relevant outfalls, discharge points, and downstream locations. The inspections should record any projected maintenance activities.

7.6.2.3 Visual Observations Following a Qualifying Rain Event

Within 48 hours following a qualifying rain event (½ inch of rain) a stormwater visual monitoring site inspection is required to observe:

- Evidence of any spills, leaks, or uncontrolled pollutant sources that may have migrated offsite;
- BMPs to identify if they have been properly designed, implemented, and effective;
- Need for additional BMPs or BMP maintenance;
- Any stormwater storage and containment areas to detect leaks and ensure maintenance of adequate freeboard; and
- Discharge of stored or contained rain water.

7.6.3 Visual Monitoring Procedures

Visual monitoring shall be conducted by the QSP or staff trained by and under the supervision of the QSP. The name(s) and contact number(s) of the site visual monitoring personnel provided in Appendix M.

Stormwater observations shall be documented on the "BMP Inspection Report" (Appendix J). BMP inspections shall be documented on the site specific BMP inspection checklist. Any photographs used to document observations will be referenced on stormwater site inspection report and maintained with the Monitoring Records in Appendix J.

The QSP shall submit copies of the completed inspection report to Owner on a weekly basis.

The completed reports will be kept in Appendix J of the official on-site SWPPP.

7.6.4 Visual Monitoring Follow-Up and Reporting

Correction of deficiencies identified by the observations or inspections, including required repairs or maintenance of BMPs, shall be initiated and completed as soon as possible.

If identified deficiencies require design changes, including additional BMPs, the implementation of changes will be initiated within 72 hours of identification and be completed as soon as possible. When design changes to BMPs are required, the SWPPP shall be amended to reflect the changes.

Deficiencies identified in site inspection reports and correction of deficiencies will be tracked on the "BMP Inspection Report" and shall be submitted to the Owner by the QSP and shall be kept in Appendix J.

The QSP shall submit copies of the completed "BMP Inspection Reports" with the corrective actions to Owner on a weekly basis.

Results of visual monitoring must be summarized and reported in the Annual Report.

7.6.5 Visual Monitoring Locations

The inspections and observations identified in Sections 7.6.1 and 7.6.2 will be conducted at the locations identified in this section.

BMP locations are shown on the Water Pollution Control Drawings in Appendix B.

- Each drainage area. Since the project is comprised of a linear roadway, and construction will occur linearly along the roadway and not along the entire roadway at one time, the Contractor will visually monitor the entire length of the roadway in active construction as well as the Contractor's staging / storage area(s).
- Stormwater storage or containment area(s).
- Discharge location(s).

7.7 Water Quality Sampling and Analysis

Water quality sampling and analysis serves to demonstrate the project is in compliance with discharge prohibitions. The project is classified as Risk Level 3 and shall perform water quality sampling and analysis for non-visible pollutants, pH and turbidity during storm events, and for non-stormwater discharges.

7.7.1 Non-Visible Pollutants in Stormwater Runoff Discharges

This CSMP for Non-Visible Pollutants describes the sampling and analysis strategy and schedule for monitoring non-visible pollutants in stormwater runoff discharges from the project site.

Sampling for non-visible pollutants will be conducted when (1) a breach, leakage, malfunction, or spill is observed; and (2) the leak or spill has not been cleaned up prior to the rain event; and (3) there is the potential for discharge of non-visible pollutants to surface waters or drainage system.

The following construction materials, erosion control products (e.g tackifiers or soil amendments), wastes, or activities, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Storage, use, and operational locations are shown on the Site Maps in Appendix B.

- Construction materials
- Construction wastes

The following existing site features, as identified in Section 2.6, are potential sources of non-visible pollutants to stormwater discharges from the project. Locations of existing site features contaminated with non-visible pollutants are shown on the WPCDs in Appendix B.

- NONE

The project has the potential to receive stormwater run-on from the following locations with the potential to contribute non-visible pollutants to stormwater discharges from the project. Locations of such run-on to the project site are shown on the WPCDs in Appendix B.

- NONE

7.7.1.1 Non-Visible Pollutants Sampling Schedule

Samples for the potential non-visible pollutant(s) and a sufficiently large unaffected background sample shall be collected during the first two hours of discharge from rain events that result in a sufficient discharge for sample collection. Samples shall be collected during the site's scheduled hours and shall be collected regardless of the time of year and phase of the construction.

Collection of discharge samples for non-visible pollutant monitoring will be triggered when any of the following conditions are observed during site inspections conducted prior to or during a rain event.

- Materials or wastes containing potential non-visible pollutants are not stored under watertight conditions. Watertight conditions are defined as (1) storage in a watertight container, (2) storage under a watertight roof or within a building, or (3) protected by temporary cover and containment that prevents stormwater contact and runoff from the storage area.
- Materials or wastes containing potential non-visible pollutants are stored under watertight conditions, but (1) a breach, malfunction, leakage, or spill is observed, (2) the leak or spill is not cleaned up prior to the rain event, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- A construction activity, including but not limited to those in Section 2.6, with the potential to contribute non-visible pollutants (1) was occurring during or within 24 hours prior to the rain event, (2) BMPs were observed to be breached, malfunctioning, or improperly implemented, and (3) there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.
- Soil amendments that have the potential to change the chemical properties, engineering properties, or erosion resistance of the soil have been applied, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

- Stormwater runoff from an area contaminated by historical usage of the site has been observed to combine with stormwater runoff from the site, and there is the potential for discharge of non-visible pollutants to surface waters or a storm drain system.

7.7.1.2 Non-Visible Pollutants Sampling Locations, Collection and Analysis

If a stormwater visual monitoring site inspection conducted prior to or during a storm event identifies the potential for the discharge of non-visible pollutants to surface waters or a storm drain system that was not previously identified on the WPCDs, sampling locations will be selected by the QSP using the same rationale as that used to identify planned locations. Non-visible pollutant sampling locations shall be identified by the QSP on the pre-rain event inspection form and/or Rain Event Action Plan prior to a forecasted qualifying rain event. The project is comprised of a linear roadway, and construction will occur linearly along the roadway and not along the entire roadway at one time. As such, Contractor shall select the sampling location at an existing curlvert crossing nearest his/her current work location.

Sampling locations are based on proximity to planned non-visible pollutant storage, occurrence or use; accessibility for sampling, and personnel safety. Planned non-visible pollutant sampling locations are shown on the WPCDs in Appendix B and include the locations identified in Table 7.2 through 7.6.

Samples of discharge shall be collected at the designated non-visible pollutant sampling locations shown on the WPCDs in Appendix B. Samples shall be collected in the locations determined by observed breaches, malfunctions, leakages, spills, operational areas, soil amendment application areas, and historical site usage areas that triggered the sampling event.

Grab samples shall be collected and preserved in accordance with the methods identified in Table 7.9 "List of Non-Visible Laboratory Analytical Constituents" provided in Section 7.7.1.4. Only the QSP, or personnel trained in water quality sampling under the direction of the QSP, shall collect samples.

Sample collection and handling requirements are described in Section 7.9.

Samples shall be analyzed using the analytical methods identified in Table 7.7, and samples will be analyzed by laboratory identified in Section 7.9.

One (1) sampling location on the project site has been identified for the collection of samples of runoff from planned material and waste storage areas and areas where non-visible pollutant producing construction activities are planned.

Table 7.2 Non-Visible Pollutant Sample Locations

Sample Location Number	Sample Location Description	Sample Location STA
1	TBD in the Field	TBD

No (0) sampling locations have been identified for the collection of samples of runoff from drainage areas where soil amendments will be applied that have the potential to affect water quality.

Table 7.3 Non-Visible Pollutant Sample Locations – Soil Amendment Areas

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
N/A	N/A	N/A

No (0) sampling locations have been identified for the collection of samples of runoff from drainage areas contaminated by historical usage of the site.

Table 7.4 Non-Visible Pollutant Sample Locations – Areas of Historical Contamination

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
N/A	N/A	N/A

No (0) sampling location(s) has been identified for the collection of an un-contaminated sample of runoff as a background sample for comparison with the samples being analyzed for non-visible pollutants.

Table 7.5 Non-Visible Pollutant Sample Locations – Background (Unaffected Sample)

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
N/A	N/A	N/A

No (0) sampling locations have been identified for the collection of samples of run-on to the project site. Run-on from these locations has the potential to combine with discharges from the site being sampled for non-visible pollutants. These samples are intended to identify potential sources of non-visible pollutants that originate off the project site. Contractor shall field determine run-on sampling locations as needed in the field pending work location and condiations.

Table 7.6 Non-Visible Pollutant Sample Locations – Site Run-On

Sample Location Number	Sample Location	Sample Location Latitude and Longitude (Decimal Degrees)
1	TBD in Field	N/A

7.7.1.3 Analytical Constituents

Table 7.7 lists pollutant sources associated with different construction phases, associated field test and water quality indicator constituent(s) for that pollutant.

Table 7.7 Pollutant Sources, Field Test and Indicator Constituents

Pollutant Source	Field Test[(1)]	Water Quality Indicator Constituent
Demolition		
Sediment	(visible)	
Solvents	N/A	Volatile Organics
Vehicle Fuels	(visible)	Oil and Grease or TPH
Metals	N/A	Total/Dissolved Metals
Bacteria	N/A	Total/Fecal Coliform
Litter	(visible)	
Utility Installation		
Sediment	(visible)	
Fuels/Lubricants	N/A	Oil and Grease/TPH
Chlorinated Water	Colorimetric	
Concrete	pH	Lab pH
Bacteria	N/A	Total/Fecal Coliform
Vertical / Roadway Construction		
Sediment	(visible)	
Adhesives, Sealants, Resins	N/A	Semi-Volatile Organics
Fuels, Lubricants, Hydraulic Fluid	N/A	Oil and Grease or TPH
Concrete	pH	Lab pH
Litter	(visible)	
Bacteria	N/A	Total/Fecal Coliform
Organics	N/A	Semi-Volatile Organics
Paint	(visible)	
Asphalt (liquid)	N/A	TPH

(1) Based on consultation with SWPPP preparer or monitoring specialist.

7.7.1.4 Non-Visible Pollutants Data Evaluation and Reporting

The QSP shall complete an evaluation of the water quality sample analytical results.

Runoff/downgradient results shall be compared with the associated upgradient/unaffected results and any associated run-on results. Should the runoff/downgradient sample show an increased level of the tested analyte relative to the unaffected background sample, which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

The General Permit prohibits the stormwater discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the Owner and other agencies as required by 40 C.F.R. §§ 117.3 and 302.4.

Results of non-visible pollutant monitoring shall be reported in the Annual Report.

Table 7.9 List of Non-Visible Laboratory Analytical Constituents

Constituent/ Parameter Name	Constituent Abbreviation	Bottle Type	Volume Required[1] (mL)	Preservation	Method Type	EPA Method Number	Holding Time	Units	Target Reporting Limit
Conventional									
Specific Conductance	EC	Poly-Propylene	50	N/A	N/A	120.1	ASAP	umhos/cm	1
pH[3]	pH		50	N/A	Electrometric	150.1	ASAP	pH unit	+/- 0.1
Hydrocarbons									
Total Recoverable Petroleum Hydrocarbons	TRPH	Glass	1000	4 degrees Celsius	Gas chromatography	8015b	14 days	µg/L	50
Oil and Grease (HEM/SGT)	O&G		1000	H_2SO_4 to pH<2	Gravimetric	1664	28 days	mg/L	5
Nutrients									
Nitrate-Nitrogen	NO_3-N	Poly-Propylene	100	4 degrees Celsius	Ion chromatography	300.0	48 hours	mg/L	0.1
Ammonia-Nitrogen	NH_3-N		100	None	Titrimetric	350.2	28 days	mg/L	0.1
Total Phosphorus	Total P		100	HNO_3 or H_2SO_4 to pH<2	Colorimetric	365.2	28 days	mg/L	0.03
Detergents	MBAS		500	4 degrees Celsius	Colorimetric	425.1	48 hours	mg/L	0.1
Bacteriological									
Coliform (Fecal)	FC	Poly-Propylene	50	$Na_2S_2O_3$	Multiple-tube fermentation	9211E	6 hours	MPN/100 ml	1
Coliform (Total)	TC		50	$Na_2S_2O_3$	Multiple-tube fermentation	9221B	6 hours	MPN/100 ml	1
Metals									
Total Recoverable	TR	Poly-Propylene	250	HNO_3 or H_2SO_4 to pH<2	GFAA; ICP-MS	200.8	Filter for dissolved fraction and preserve within 48 hours; analyze within 6 months.	µg/L	0.2-5[5]
Dissolved [4]	Diss		250	HNO_3 or H_2SO_4 to pH <2[2]	GFAA; ICP-MS	200.8		µg/L	0.2-5[5]
Organics									
Volatile Organics	VOCs	Glass	2 x 40 vials	4 degrees Celsius	GC-MS	8020	14 days	µg/L	0.5-50
Semi-Volatile Organics	SVOCs		1000	4 degrees Celsius	GC-MS	8270	Extract in 7 days, analyze within 40 days	µg/L	0.05-0.25
Pesticides	Pest		1000	4 degrees Celsius	Gas chromatography	8141, 8081		µg/L	0.5-1

Notes:
(1) For analytical methods, reporting limits, and other specifications, see Table 4-1.
(2) Dissolved metals preserved after filtration.
(3) Report pH to nearest 0.1 std. pH unit. Also report temperature at time of measurement.
(4) Filter dissolved samples prior to analysis.
(5) Target reporting limit varies by metal.

7.7.2 Sampling and Analysis Plan for pH and Turbidity in Stormwater Runoff Discharges

Sampling and analysis of runoff for pH and turbidity is required. This CSMP describes the strategy for monitoring turbidity and pH levels of stormwater runoff discharges from the project site and run-on that may contribute to an exceedance of a Numeric Action Level (NAL).

Samples for pH and turbidity will be collected from all drainage areas with disturbed soil areas.

7.7.2.1 pH and Turbidity Sampling Schedule

Stormwater runoff samples shall be collected for turbidity from all qualifying rain events that result in a discharge from the project site. At minimum, turbidity samples will be collected from each site discharge location draining a disturbed area. A minimum of three samples will be collected per day of discharge during a qualifying event. Samples should be representative of the total discharge from the project each day of discharge during the qualifying rain event. Representative samples will be spaced in time throughout the daily discharge event, to the extent possible.

Stormwater runoff samples shall be collected for pH from all qualifying rain events that result in a discharge from the project site. At minimum, pH samples will be collected from each site discharge location during project phases and drainage areas with a high risk of pH discharge. A minimum of three samples will be collected per day of discharge during a qualifying rain event. Samples should be representative of the total discharge from the location each day of discharge during the qualifying rain event. Typically representative samples will be spaced in time throughout the daily discharge event.

Stored or collected water from a qualifying storm event when discharged shall be tested for turbidity and pH (when applicable). Stored or collected water from a qualifying event may be sampled at the point it is released from the storage or containment area or at the site discharge location.

Run-on samples shall be collected whenever the QSP identifies that run-on has the potential to contribute to an exceedance of a NAL.

7.7.2.2 pH and Turbidity Sampling Locations and Collection

Sampling locations are based on the site runoff discharge locations and locations where run-on enters the site; accessibility for sampling; and personnel safety. Planned pH and turbidity sampling locations as identified is Section 7.7.1.2 and include the locations identified in Table 7.10. Sampling will occur in the construction area of the project which is active during the quaifying event as well as the Contractor's staging / storage area.

Samples of discharge shall be collected at the designated runoff and run-on sampling locations as identified in Table 7.6, above. Run-on samples shall be collected within close proximity of the point of run-on to the project.

Only personnel trained in water quality sampling and field measurements working under the direction of the QSP shall collect samples.

Sample collection and handling requirements are described in Section 7.9.

One (1) sampling location on the project site has been identified for the collection of runoff samples. A second sampling location will be selected by the QSP using the same rationale as that used to identify the planned location.

Table 7.10 Turbidity and pH Runoff Sample Locations

Sample Location Name or Number	Sample Location Latitude and Longitude (Decimal Degrees or Station)	Estimate of Site Drainage Factor (%)
1	TBD in the Field	N/A
2	TBD in the Field	N/A

7.7.2.3 Field Parameters and Measurements

Samples shall be analyzed for the constituents indicated in the table below "Sample Collection, and Analysis for Monitoring Turbidity and pH."

Table 7.11 Sample Collection and Analysis for Monitoring Turbidity and pH

Parameter	Test Method	Minimum Sample Volume[(1)]	Sample Collection Container Type	Detection Limit (minimum)
Turbidity	Field meter/probe with calibrated portable instrument	50 mL	Polypropylene or Glass (Do not collect in meter sample cells)	1 NTU
pH	Field meter/probe with calibrated portable instrument or calibrated pH test kit	100 mL	Polypropylene	0.2 pH units

(1) Minimum sample volume recommended. Specific volume requirements will vary by instrument; check instrument manufacturer instructions.

L – Liter mL – Milliliter NTU – Nephelometric Turbidity Unit

Samples collected for field analysis, collection, analysis and equipment calibration shall be in accordance with the field instrument manufacturer's specifications.

Immediately following collection, samples for field analysis shall be tested in accordance with the field instrument manufacturer's instructions and results recorded on the "Inspection and Monitoring Forms".

The field instrument(s) listed in Table 7.12 will be used to analyze the following constituents (to be identified by Contractor):

Table 7.12 Field Instruments

Field Instrument (Manufacturer and Model)	Constituent
Contractor to update	pH
Contractor to update	Turbidity

Include the manufacturers' instructions in CSMP Attachment 2 "Field Meter Instructions". Field sampling staff shall review the instructions prior to each sampling event and follow the instructions in completing measurement of the samples.

- The instrument(s) shall be maintained in accordance with manufacturer's instructions.
- The instrument(s) shall be calibrated before each sampling and analysis event.
- Maintenance and calibration records shall be maintained with the SWPPP.

7.7.2.4 Data Evaluation and Reporting

Numeric Action Levels

This project is subject to NALs for pH and turbidity (Table 7.13). Compliance with the NAL for pH and turbidity is based on a daily average. Upon receiving the field log sheets, the QSP shall immediately calculate the average of the pH and turbidity samples to determine if the NALs, shown in the table below, have been exceeded.

Table 7.13 Numeric Action Levels

Parameter	Unit	Daily Average
pH	pH units	Lower NAL = 6.5 Upper NAL = 8.5
Turbidity	NTU	250 NTU

Within one week of the sample collection, the QSP shall submit copies of the completed "Inspection and Monitoring Forms" to Owner.

In the event that the pH or turbidity NAL is exceeded, the QSP shall immediately notify Owner and investigate the cause of the exceedance and identify corrective actions.

Exceedances of NALs shall be electronically reported to the SWRCB by the QSP or the Owner through the SMARTs system within 10 days of the conclusion of the storm event. If requested by the RWQCB, a NAL Exceedance report will be submitted. The NAL Exceedance Report must contain the following information:

- Analytical method(s), method reporting unit(s), and MDL(s) of each parameter;
- Date, place, time of sampling, visual observation, and/or measurements, including precipitation; and
- Description of the current BMPs associated with the sample that exceeded the NAL and the proposed corrective actions taken.

Receiving Water Monitoring Triggers

This project is subject to Receiving Water Monitoring Triggers for pH and turbidity (Table 7.14). Compliance with the Receiving Waters Monitoring Triggers for pH and turbidity is based on a [weighted] daily average. Upon receiving the field log sheets, the QSP shall immediately calculate the [weighted] average of the turbidity samples, and the [weighted] logarithmic average of the pH samples to determine if the Receiving Water Monitoring Triggers, shown in the table below, have been exceeded.

Table 7.14 Receiving Water Monitoring Triggers

Parameter	Unit	Daily Average
pH	pH units	Lower NAL = 6.0 Upper NAL = 9.0
Turbidity	NTU	500 NTU

All pH and turbidity data shall be electronically reported to the State Water Board by The Stormwater Permit Specialist through SMARTS within 10 days of the conclusion of each storm event.

In the event that the pH or turbidity Receiving Water Monitoring Trigger is exceeded, the QSP shall immediately notify the Project Engineer who will then notify the Stormwater Permit Specialist.

Exceeding a Receiving Water Monitoring Trigger requires the implementation of receiving water monitoring described in Section 7.7.3, unless one of the following two conditions existed:

- The exceedance occurred during a storm event equal to or larger than the compliance storm event of 5 inches of rain (in a 24 hour period) as demonstrated by the on-site rain gauge and confirmed with data from a nearby governmental rain gauge; or
- The exceedance was caused by run-on from a natural disaster (such as a forest fire).

Exceptions to the Receiving Water Monitoring Triggers will be documented in the SWPPP by the QSP and submitted to SMARTS when the data for the storm even is uploaded.

7.7.3 Sampling and Analysis Plan for pH, Turbidity , and SSC in Receiving Water

The project has a direct discharge to the following receiving water(s):

- Add

Following the exceedance of a Receiving Water Monitoring Trigger receiving water monitoring is required.

7.7.3.1 Sampling Schedule and Locations

Following the Exceedance of the pH receiving water monitoring trigger, receiving water samples shall be collected for pH and any parameters required by the Regional Water Board.

Following the exceedance of the turbidity Receiving Water Monitoring Trigger, receiving water samples shall be comllected for trubididty, SSC, and any parameters required by the Regional Water Board.

Receiving water samples will be collected in accordance with Section 7.3.

Sampling locations are based on the site discharge locations into the receiving waters, location accessibility for sampling and personnel safety.

Table 7.15 Receiving Water Sample Locations

Upstream/Up-gradient/Background *(This location(s) is a representative and accessible location located as close as possible and upstream from the runoff discharge point)*		
Sample Location Number	**Sample Location**	**Sample Location Latitude and Longitude** (Decimal Degrees)
1	TBD in the Field	N/A
2	TBD in the Field	N/A
Downstream/downgradient *(This location(s) is a representative and accessible location located as close as possible and downstream from the runoff discharge point)*		
1	TBD in the Field	N/A
2	TBD in the Field	N/A

The receiving water locations are located on the project site. No special permissions are needed to access the site.

7.7.3.2 Monitoring Preparation

Receiving water samples will be collected and analyzed by:

Contractor	☒ Yes	☐ No	OR
Consultant	☒ Yes	☐ No	OR
Laboratory	☒ Yes	☐ No	

If collected by the Contractor, samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number: _____

Alternate(s)/Telephone Number: _____

If collected by a Laboratory or Environmental Consultant, samples on the project site will be collected by the following:

Company Name: _____

Street Address: _____

City, State, Zip: _____

Telephone Number: _____

Point of Contact: _____

Name of Sampler(s): _____

Adequate stock of monitoring supplies and equipment for monitoring the receiving will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, clean powder –free nitrile gloves, sample collection equipment, field meters, appropriate sample containers, paper towels, personal rain gear, and *Receiving Water Sampling Field Log Sheets* and CoC forms provided in CSMP Attachment 3 "Example Forms".

The QSP or his/her designee will contact (laboratory/environmental consultant) 24 hours prior to a planned receiving water sampling event to ensure that adequate sample collection personnel, supplies for monitoring are available and will be mobilized to collect sample on the project site in accordance with the sampling schedule.

7.7.3.3 Sample Collection and Analysis

Receiving water samples shall be collected at the designated sampling locations shown on the Site Maps in Appendix B and as identified in Section 7.7.3.2.1.

Only personnel trained in water quality sampling under the direction of the QSP shall collect samples.

SSC grab samples for laboratory analysis shall be collected and preserved in accordance with the methods identified in the Table 7.19. Samples will be shipped to the laboratory identified below.

Table 7.16 Sample Collection, Preservation and Analysis for Monitoring Suspended Sediment Concentration (SSC)

Parameter	Test Method	Sample Preservation	Minimum Sample Volume	Sample Bottle	Maximum Holding Time	Detection Limit (minimum)
Suspended Sediment Concentration (SSC)	ASTM D3977-97	Store at 4°C (39.2°F)	20 mL	Contact Laboratory	7 Days	5 mg/L

Receiving water samples will be collected and analyzed by:

Contractor	☒ Yes	☐ No	OR
Consultant	☒ Yes	☐ No	OR
Laboratory	☒ Yes	☐ No	

If collected by the Contractor, samples on the project site will be collected by the following Contractor sampling personnel:

Name/Telephone Number: _____

Alternate(s)/Telephone Number: _____

If collected by a Laboratory or Environmental Consultant, samples on the project site will be collected by the following:

Company Name: _____

Street Address: _____

City, State, Zip: _____

Telephone Number: _____

Point of Contact: _____

Name of Sampler(s): _____

Samples for field parameters shall be analyzed for the constituents indicated in Section 7.7.2.4 "Sample Collection, and Analysis for Monitoring Turbidity and pH." Turbidity and pH samples shall be analyzed immediately.

Grab samples for parameters required by the Regional Water Board shall be collected and preserved in accordance with the methods identified in Section 7.7.5.5. Samples will be shipped to the laboratory identified in Section 7.7.1.6.

Sample collection in handling requirements are described in Section 7.7.7.

7.7.3.4 Data Evaluation and Reporting

The QSP shall complete an evaluation of the receiving water quality sample analytical results.

Down-gradient results shall be compared with the associated up-gradient/background results and any associated construction runoff results. Should the down-gradient sample show an increased level of the tested analyte relative to the up-gradient/background sample, the QSP shall initiate an evaluation of the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase in the receiving water.

As determined by the evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

Receiving water data shall be reported in the Annual Report.

7.7.4 Non-Stormwater Discharges

This CSMP for non-stormwater discharges describes the sampling and analysis strategy and schedule for monitoring pollutants in authorized and unauthorized non-stormwater discharges from the project site in accordance with the requirements of the Construction General Permit.

Sampling of non-stormwater discharges will be conducted when an authorized or unauthorized non-stormwater discharge is observed discharging from the project site. In the event that non-stormwater discharges run-on to the project site from offsite locations, and this run-on has the potential to contribute to a violation of a NAL, the run-on will also be sampled.

Activities that employ water, such as concrete curing, dust control, rinsing or washing tools or equipment are possible sources of unauthorized non-stormwater discharges. Other sources include water line or sewer line breaks.

The following authorized non-stormwater discharges identified in Section 2.7 have the potential to be discharged from the project site.

- Potable Water for Dust Control
- Goundwater and stormwater dewatering

In addition to the above authorized stormwater discharges, some construction activities have the potential to result in an unplanned (unauthorized) non-stormwater discharge if BMPs fail. These activities include:

- Paving and Griding Operations
- Vehicle and equipment fueling and maintenance opeartions
- Slurries from concrete cutting and coring operation, PCC grinding or AC grinding operations
- Slurries from concrete or mortar mixing operations
- Water from cleaning painting equipment
- Runoff from dust control applications of water or dust palliatives
- Sanitary and septic wastes
- Chemical leaks and/or spills

7.7.4.1 Non-Stormwater Sampling Schedule

Samples of authorized or unauthorized non-stormwater discharges shall be collected when they are observed.

7.7.4.2 Non-Stormwater Sampling Locations, Collection and Analysis

Samples shall be collected from any point leaving the site, including the discharge point of the construction site where the non-stormwater discharge is running off the project site. Site discharge locations are shown on the Water Pollution Control Drawings in Appendix B and include the locations identified below.

Samples shall be collected at the discharge locations where the non-stormwater discharge is leaving the project site. Potential discharge locations are shown on the Water Pollution Control Drawings in Appendix B and identified in Section 7.7.3.2.

Grab samples shall be collected and preserved in accordance with the methods identified in Table 7.9. Only personnel trained in water quality sampling under the direction of the QSP shall collect samples. Sample collection and handling requirements are described in Section 7.9.

Samples shall be analyzed for turbidity and pH as described in 7.7.2. For non-visible constituents using the analytical methods identified in Table 7.9, and samples will be analyzed by laboratory identified in Section 7.9.

One (1) sampling location on the project site has been identified where non-stormwater discharges may runoff from the project site.

No (0) sampling locations have been identified for the collection of non-stormwater discharges that run-on to the project site.

Table 7.17 Sample Collection and Analysis for Monitoring Non-Stormwater Discharges

Sample Location Name or Number	**Sample Location Latitude and Longitude** (Decimal Degrees or Station)
1	TBD in the field

7.7.4.3 Analytical Constituents

All non-stormwater discharges that flow through a disturbed area shall, at minimum, be monitored for turbidity.

All non-stormwater discharges that flow through an area where they are exposed to pH altering materials shall be monitored for pH.

The QSP shall identify additional pollutants to be monitored for each non-stormwater discharge incident based on the source of the non-stormwater discharge. If the source of an unauthorized non-stormwater discharge is not known, monitoring for pH, turbidity, MBAS, TOC, and residual chlorine or chloramines is recommended to help identify the source of the discharge.

Non-stormwater discharge run-on shall be monitored, at minimum, for pH and turbidity. The QSP shall identify additional pollutants to be monitored for each non-stormwater discharge incident based on the source of the non-stormwater discharge. If the source of an unauthorized non-stormwater discharge is not known, monitoring for pH, turbidity, methyl blue active substances (MBAS), total organic carbons (TOC), and residual chlorine or chloramines is recommended to help identify the source of the discharge.

Table 7.15 lists the specific sources and types of potential non-visible pollutants on the project site and the water quality indicator constituent(s) for that pollutant.

Table 7.15 Potential Non-Stormwater Discharge Pollutants and Water Quality Indicator Constituents

Pollutant Source	**Pollutant**	**Water Quality Indicator Constituent**
Disturbed Areas	Sediment	Turbidity
Paving and Grinding Operations	pH	pH

7.7.44 Data Evaluation and Reporting

The QSP shall complete an evaluation of the water quality sample analytical results.

Turbidity and pH results shall be evaluated for compliance with NALs as identified in Section 7.7.4.4.

Should the runoff sample indicate the discharge of a pollutant which cannot be explained by run-on results, the BMPs, site conditions, and surrounding influences shall be assessed to determine the probable cause for the increase.

As determined by the site and data evaluation, appropriate BMPs shall be repaired or modified to mitigate discharges of non-visible pollutant concentrations. Any revisions to the BMPs shall be recorded as an amendment to the SWPPP.

Non-stormwater discharge results shall be submitted with the Annual Report.

The General Permit prohibits the discharge of non-stormwater discharges that contain hazardous substances equal to or in excess of reportable quantities established in 40 C.F.R. §§ 117.3 and 302.4. The results of any non-stormwater discharge results that indicate the presence of a hazardous substance in excess of established reportable quantities shall be immediately reported to the RWQCB

7.7.5 Other Pollutants Required by the Regional Water Quality Control Board

The RWQCB has specified monitoring for the following additional pollutants:

- NONE

7.7.6 Active Treatment System

The project does not include ATS.

Add Bioassessment monitoring if required….

7.8 Training of Sampling Personnel

Sampling personnel shall be trained to collect, maintain, and ship samples in accordance with the Surface Water Ambient Monitoring program (SWAMP) 2008 Quality Assurance Program Plan (QAPrP). Training records of designated Contractor sampling personnel are provided in Appendix L.

The stormwater sampler(s) and alternate(s) have received the following stormwater sampling training (to be completed by Contractor):

Name	Training

The stormwater sampler(s) and alternates have the following stormwater sampling experience (to be completed by Contractor):

Name	Experience

Name	Experience

7.9 Sample Collection, Preservation and Delivery

Samples will be analyzed by (to be completed by Contractor):

Laboratory Name: _____

Street Address: _____

City, State Zip: _____

Telephone Number: _____

Point of Contact: _____

ELAP Certification Number: _____

Samples will be delivered to the laboratory by:

Driven by Contractor	☒ Yes	☐ No	OR	
Picked up by Laboratory Courier	☒ Yes	☐ No		
Shipped	☒ Yes	☐ No		

An adequate stock of monitoring supplies and equipment for monitoring turbidity and will be available on the project site prior to a sampling event. Monitoring supplies and equipment will be stored in a cool temperature environment that will not come into contact with rain or direct sunlight. Sampling personnel will be available to collect samples in accordance with the sampling schedule. Supplies maintained at the project site will include, but are not limited to, field meters, extra batteries; clean powder-free nitrile gloves, sample collection equipment, appropriate sample containers, paper towels, personal rain gear, and Inspection and Monitoring Forms (Appendix J) and Chain of Custody (CoC) forms provided in CSMP Attachment 1 "Chain of Custody Forms".

7.9.1 Sample Collection Methods

If possible, field teams will consist of two persons. Because of the unpredictability of storm events, and the requirement to sample within the first two hours of runoff, field crews must arrive at the monitoring sites before any significant stormwater runoff has been observed.

7.9.1.1 Detailed Grab Sample Collection Procedures for Each Monitoring Site

Inspect general conditions of the site. Note the conditions of the site at the time of sampling.

Once runoff is observed in the area to be sampled (sheet flow, drainpipe, or other stormwater conveyance), manually collect a water sample with a clean polypropylene collection device, or directly into sample container proved by laboratory.

Once sufficient water has been collected in the collection device, carefully pour the water into each of the laboratory sample bottles using a polypropylene funnel. Note: For collection of oil and grease samples, a glass or metal funnel should be used.

After all water samples have been collected, clean equipment with a 2% Contrad (or equivalent) detergent solution, rinse off the polypropylene collection device and funnels with distilled water and towel dry to prepare for the next sampling event.

7.9.2 Field Measurement Methods

Certain grab samples will require field measurement of certain parameters. To accomplish this, pour a subsample of stormwater a clean plastic cup for field measurements. pH and electrical conductivity can be measured using hand-held devices. The devices will be calibrated prior to mobilization at the monitoring site. At some locations, colorimetric field test kits (e.g., HACH field kits) may be used to test for the presence of chlorine or detergents. Follow manufacturers' instructions on proper use of the test kits. The measurements will be recorded in field notes and on the chain-of-custody forms. The sub-sample will then be discarded following recording of the field measurements.

7.9.3 Sample Containers and Handling

Sampling procedures involving handling items that have direct contact with the samples (i.e., sampling container, container lid, etc.) will be performed in accordance with proper sample handling techniques designed to minimize contamination of the sample. Sampling personnel are required to wear clean powder-free nitrile gloves. If sampling with a two member team, one member of the field team shall be responsible for sample collection and will change gloves between sample collections, or when the gloves have come in contact with any potential source of contamination. The other field team member will be responsible for cleaning of sampling equipment and all other activities that do not involve handling items that have direct contact with the sample. If one person is collecting and documenting all samples, care shall be taken to not cross-contaminate or introduce contaminates to samples.

7.9.4 Forms and Procedures for Documenting Sample Collection and Field Measurements

The following forms are to be completed during each storm monitoring event at each site:

- Monitoring checklist
- Non-Visible Pollutant Monitoring Report.
- Chain-of-custody form (other copies will be retained by the laboratory)

Copies of these forms are included in Appendix J and CSMP Attachment 1.

7.9.5 Laboratory Communication Procedures

Staff will contact the analytical laboratory 24 hours before the anticipated beginning of the storm event. The laboratory will be instructed to prepare sample bottles for use at the monitoring sites and to prepare for receipt of samples during and following the storm event.

7.9.6 Sample Shipping/Delivery and Chain of Custody

After grab samples are collected, staff is responsible for delivery of grab samples to the analytical laboratory as soon as possible to meet sample holding time requirements. If samples are to be analyzed for bacteria, they must be delivered to the laboratory within six hours of sample collection. Samples for all other analyses should be delivered within 24 hours of collection. The laboratory should be notified of estimated time of delivery and be alerted when weekend delivery is required. The following list outlines the packaging and shipping procedures for pick-up:

- Assemble and package all sample bottles in an orderly and secure manner for delivery to the laboratory.
- Verify information on the chain-of-custody form completed by the field crew on a cooler-by-cooler basis.
- If multiple coolers contain bottles from the same station, indicate this on all related forms.
- Use military time (i.e., 2 p.m. = 1400 hours) for all entries.
- If necessary, re-pack coolers with ice to keep samples cool and to prevent breakage.
- Place the completed chain-of-custody form in a re-sealable bag and place the form in the cooler with the bottles.
- Pack any sampler bottles to be cleaned for delivery to lab.

7.9.7 Sample Preservation and Filtration

During collection of grab samples, the field teams will:

- Seal sample bottles in re-sealable plastic bags.
- Place them in a cooler.
- Pack the cooler with ice in order to preserve the samples below 4 degrees Celsius (39.2 degrees Fahrenheit).
- Once samples are at the laboratory, they will be refrigerated until analysis.

Sample filtration and/or preservative may be required for some analyses, including dissolved metals. Because of contamination concerns, this will be performed in the laboratory in accordance with procedures specified by the appropriate analytical method.

7.10 Quality Assurance and Quality Control

An effective Quality Assurance and Quality Control (QA/QC) plan shall be implemented as part of the CSMP to ensure that analytical data can be used with confidence. QA/QC procedures to be initiated include the following:

- Field logs;
- Clean sampling techniques;
- CoCs;
- QA/QC Samples; and

- Data verification.

Each of these procedures is discussed in more detail in the following sections.

7.10.1 Field Logs

The purpose of field logs is to record sampling information and field observations during monitoring that may explain any uncharacteristic analytical results. Sampling information to be included in the field log include the date and time of water quality sample collection, sampling personnel, sample container identification numbers, and types of samples that were collected. Field observations should be noted in the field log for any abnormalities at the sampling location (color, odor, BMPs, etc.). Field measurements for pH and turbidity should also be recorded in the "Inspection and Monitoring Forms". A "BMP Inspection Report" and "Inspection and Monitoring Forms" are included in Appendix J.

7.10.2 Clean Sampling Techniques

Clean sampling techniques involve the use of certified clean containers for sample collection and clean powder-free nitrile gloves during sample collection and handling. Adoption of a clean sampling approach will minimize the chance of field contamination and questionable data results.

7.10.3 Chain of Custody

The sample CoC is an important documentation step that tracks samples from collection through analysis to ensure the validity of the sample. Sample CoC procedures include the following:

- Proper labeling of samples;
- Use of CoC forms for all samples; and
- Prompt sample delivery to the analytical laboratory.

Analytical laboratories usually provide CoC forms to be filled out for sample containers. An example CoC is included in CSMP Attachment 1 "Chain of Custody Forms".

7.10.4 QA/QC Samples

QA/QC samples provide an indication of the accuracy and precision of the sample collection; sample handling; field measurements; and analytical laboratory methods. The following types of QA/QC will be conducted for this project:

Table 7.17 QA/QC Sample Frequency

QA/QC Sample Type	Sampling Frequency
Equipment Blanks	Will be collected from polypropylene grab sampling equipment prior to the sampling season.
Field Duplicates	Will be collected for 10% of the total number of samples collected.
Laboratory Duplicates	Will be collected for 10% of the total number of samples collected.
Matrix Spike/ Matrix Spike Duplicates	Will be collected for 10% of the total number of samples collected.

Method Blanks	Will be run with each QC batch analyzed by the laboratory.

7.10.4.1 Field Duplicates

Field duplicates will collected and analyzed for 10% or the total number of grab samples collected. Field duplicates provide verification of laboratory or field analysis and sample collection. Duplicate samples shall be collected, handled, and analyzed using the same protocols as primary samples. The sample location where field duplicates are collected shall be randomly selected from the discharge locations. Duplicate samples shall be collected immediately after the primary sample has been collected. Duplicate samples must be collected in the same manner and as close in time as possible to the original sample. Duplicate samples shall not influence any evaluations or conclusion.

7.10.4.2 Equipment Blanks

Equipment blanks provide verification that equipment has not introduced a pollutant into the sample. Equipment blanks are typically collected when:

- New equipment is used;
- Equipment that has been cleaned after use at a contaminated site;
- Equipment that is not dedicated for surface water sampling is used; or
- Whenever a new lot of filters is used when sampling metals.

7.10.4.3 Field Blanks

Field blanks assess potential sample contamination levels that occur during field sampling activities. De-ioninzed water field blanks are taken to the field, transferred to the appropriate container, and treated the same as the corresponding sample type during the course of a sampling event.

7.10.4.4 Travel Blanks

Travel blanks assess the potential for cross-contamination of volatile constituents between sample containers during shipment from the field to the laboratory. De-ioninzed water blanks are taken along for the trip and held unopened in the same cooler with the VOC samples.

7.10.5 Data Verification

After results are received from the analytical laboratory, the QSP shall verify the data to ensure that it is complete, accurate, and the appropriate QA/QC requirements were met. Data must be verified as soon as the data reports are received. Data verification shall include:

- Check the CoC and laboratory reports.
- *Make sure all requested analyses were performed and all samples are accounted for in the reports.*
- Check laboratory reports to make sure hold times were met and that the reporting levels meet or are lower than the reporting levels agreed to in the contract.

- Check data for outlier values and follow up with the laboratory.
- *Occasionally typographical errors, unit reporting errors, or incomplete results are reported and should be easily detected. These errors need to be identified, clarified, and corrected quickly by the laboratory. The QSP should especially note data that is an order of magnitude or more different than similar locations, or is inconsistent with previous data from the same location.*
- Check laboratory QA/QC results.
- *EPA establishes QA/QC checks and acceptable criteria for laboratory analyses. These data are typically reported along with the sample results. The QSP shall evaluate the reported QA/QC data to check for contamination (method, field, and equipment blanks), precision (laboratory matrix spike duplicates), and accuracy (matrix spikes and laboratory control samples). When QA/QC checks are outside acceptable ranges, the laboratory must flag the data, and usually provides an explanation of the potential impact to the sample results.*
- Check the data set for outlier values and, accordingly, confirm results and re-analyze samples where appropriate.
- *Sample re-analysis should only be undertaken when it appears that some part of the QA/QC resulted in a value out of the accepted range. Sample results may not be discounted unless the analytical laboratory identifies the required QA/QC criteria were not met and confirms this in writing.*

Field data including inspections and observations must be verified as soon as the field logs are received, typically at the end of the sampling event. Field data verification shall include:

- Check field logs to make sure all required measurements were completed and appropriately documented;
- Check reported values that appear out of the typical range or inconsistent; Follow-up immediately to identify potential reporting or equipment problems, if appropriate, recalibrate equipment after sampling;
- Verify equipment calibrations;
- Review observations noted on the field logs; and
- Review notations of any errors and actions taken to correct the equipment or recording errors.

7.11 Data Management and Reporting

7.11.1 Analytical Data Validation

Results of precision and accuracy and contamination checks will be reviewed after each storm event. In the event that data quality objectives are not met, data will be qualified and documented as necessary.

- Data collected from the laboratory will be validated through the following procedures:

- Review hard copy data package;
- Compare chain-of-custody forms to logbooks and laboratory data reports to ensure successful data transfer;
- Ensure that laboratory reports are complete;
- Ensure that there are no typographical errors or incongruities in the data;
- Compare QA/QC results with data quality objective criteria;
- Tabulate and analyze the success rate of each QA/QC parameter; and
- Document and report out-of-range values.

7.11.2 Electronic Data Transfer

Data from the laboratory will be delivered in hard copy and electronic format. Both data packages will include:

- A narrative of any problems, corrections, anomalies, and conclusions; and
- Results/summary of QA/QC elements, including:
- sample extract and analysis dates
- method blanks, laboratory control spikes, and matrix spikes
- analytical accuracy
- analytical precision
- reporting limits

Section 8 References

State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

State Water Resources Control Board (2012). Order 2012-0006-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

Appendix A: Calculations

Appendix B: Site Maps / Water Pollution Control Drawings (WPCDs)

Appendix C: Permit Registration Documents

Permit Registration Documents included in this Appendix

Y/N	Permit Registration Document
	Notice of Intent
	Risk Assessment
	Certification
	Post Construction Water Balance
	Copy of Annual Fee Receipt
No	ATS Design Documents (N/A)
	Waste Discharge Indentification (WDID) confirmation

Appendix D: SWPPP Amendment Certifications

SWPPP Amendment No. _____

Project Name: California SR 36 Improvement Project CA FLAP SR36(1)

Project Number: _____

Qualified SWPPP Developer's Certification of the Stormwater Pollution Prevention Plan Amendment

"This Stormwater Pollution Prevention Plan and attachments were prepared under my direction to meet the requirements of the California Construction General Permit (SWRCB Order No. 2009-009-DWQ as amended by 2010-0014-DWQ). I certify that I am a Qualified SWPPP Developer in good standing as of the date signed below."

QSD's Signature	Date
QSD Name	QSD Certificate Number
Title and Affiliation	Telephone
Address	Email

Appendix E: Annual Reporting

Project Specific Submittal requirements for
SMARTS Annual Report
CA Construction General Permit (Order No. 2009-009-DWQ)

Complete and submit to Contracting Officer's Representative by August 1st for the annual reporting period ending June 30th.

Site: California SR 36 Improvement Project CA FLAP SR36(1)

WDID No:_____

Completed By: _____

Date: _____

Checklist of Required Content

	Required Item	SMARTS	Retained on Site
Annual Report Submittal Requirements *(Permit Sections XVI and Attachment C.I.9)*			
SMARTS Form 1 SMARTS Form 2 SMARTS Form 3	Summary of all violations of the General Permit	X	
SMARTS Form 2 SMARTS Form 3	Summary of all corrective actions taken during the compliance year	X	
SMARTS Form 1 SMARTS Form 2 SMARTS Form 3	Identification of any compliance activities or corrective actions that were not implemented	X	
SMARTS Form 1 Attachment 1	The names of individual(s) who performed the facility inspections, sampling, visual observation (inspections), and/or measurements	X	X
Attachment 2	Inspection Log – Include the date, place, time of facility inspections, sampling, visual observation (inspections), and/or measurements, including precipitation (rain gauge)	X	X
Attachment 3	The visual observation and sample collection exception records and reports (including precipitation measurements) specified in Attachments C of the General Permit,	X	X
Attachment 4	Documentation of all training for individuals responsible for all activities associated with compliance with the General Permit,	X	X
Additional Requirement for Projects that Conducted Non-Visible Pollutant Monitoring			
Attachment 4	A summary and evaluation of all sampling and analysis results from the last three years, including copies of laboratory reports, QA/QC, analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit"),	X	X

FORM 1 *This form is designed to be consistent with SMARTS Form 1*		
	Yes, No, N/A, if No provide comment	
STORMWATER POLLUTION PREVENTION PLAN (SWPPP) [CGP Section XIV]		
1. Has a SWPPP been prepared by a Qualified SWPPP Developer (QSD) for the construction project?	Yes	
2. Does the SWPPP include a Construction Site Monitoring Program (CSMP) section/element?		
3. Are these documents kept onsite?		
GOOD SITE MANAGEMENT "HOUSEKEEPING" [CGP Attachment C, Section B]		
1. Were required good site management "housekeeping" measures for construction materials fully implemented on-site?		
a. Was an inventory of the products used and/or expected to be used conducted?		
2. Were required good site management "housekeeping" measures for waste management fully implemented on-site?		
a. Is there a spill response and implementation element of the SWPPP?		
3. Were required good site management "housekeeping" measures for vehicle storage and maintenance fully implemented on-site?		
4. Were required good site management "housekeeping" measures for landscape materials fully implemented on-site?		
5. Was a list of potential pollutant sources developed?		
6. Were good site management "housekeeping" measures to control air deposition of site materials and from site operations implemented on-site?		

FORM 1

This form is designed to be consistent with SMARTS Form 1 and shall contain the same information provided via SMARTS for annual reporting

	Yes, No, N/A, if No provide comment	
NON-STORMWATER MANAGEMENT [CGP Attachment C, Section C]		
1. Were measures to control all non-stormwater discharges during construction implemented?		
2. Were vehicles washed in such a manner as to prevent non-stormwater discharges to surface waters or to MS4 drainage systems?		
3. Were streets cleaned in such a manner as to prevent unauthorized non-stormwater discharges from reaching surface waters or MS4 drainage systems?		
EROSION CONTROLS [CGP Attachment C, Section D]		
1. Were required erosion controls implemented in accordance with the CGP and SWPPP?		
SEDIMENT CONTROLS [CGP Attachment C, Section E]		
1. Were required sediment controls fully implemented on your site?		
H. RUN-ON AND RUN-OFF CONTROLS [CGP Attachment C, Section F]		
1. Was all site run-on and run-off effectively managed?		
Inspection Maintenance and Repair		
1. Were all site inspections, maintenance, and repairs performed or supervised by a Qualified SWPPP Practitioner (QSP)?		
2. Were site inspections conducted weekly and at least once each 24-hour period during extended storm events?		
3. Were post rain event inspections conducted?		
4. Do your inspection forms/ checklists meet the minimum criteria listed in **CGP Attachment C, Section G.5**?		

FORM 1 *This form is designed to be consistent with SMARTS Form 1 and shall contain the same information provided via SMARTS for annual reporting*		
	Yes, No, N/A, if No provide comment	
5. During any site inspection was BMP maintenance or repairs required?		
6. If BMP maintenance/repair or design change was needed, did implementation begin within 72 hours?		
VISUAL MONITORING [CGP Attachment C, Section I.3]		
1. Were all stormwater discharges that occurred at all discharge locations observed within 2 business days (48 hours) after each qualifying rain event (producing precipitation of ½ inch or more at the time of discharge?		
2. Were all stormwater discharges that occurred from storage or containment systems visually observed prior to discharge?		
3. Were the time, date, and rain gauge reading recorded for each qualifying rain event?		
4. Within 2 business days (48 hours) prior to each predicted qualifying rain event, were visual inspections conducted in compliance with **CGP Attachment C, Section I.3.e&f**?		
5. Are all visual inspection records retained on-site?		
Number of Qualifying Rain Events		
STORMWATER SAMPLING [CGP Attachment C, Section I.6]		
For the sampled events, did you collect three samples, at minimum (representative of the flow and characteristics) each day of discharge per qualified event?		
Were grab samples analyzed for pH and/or turbidity? *(Analytical data must be entered in the RAW DATA tab in SMARTS)*?		
Were Active Treatment System (ATS) effluent samples taken? (Applies to projects that deployed ATS)	N/A	ATS not used for this project
Was receiving water monitoring conducted? *(Analytical data must be entered in the RAW DATA tab in SMARTS)*		
NON-STORMWATER DISCHARGE MONITORING [CGP Attachment C, Section I.6]		

1. Were all drainage areas monitored for authorized/ unauthorized non-stormwater discharges quarterly? *(Complete **Form 2**)*		
2. Did visual observations indicate any authorized/ unauthorized non-stormwater discharges?		
3. Were effluent samples taken of the authorized/ unauthorized non-stormwater discharge? *(Analytical data must be entered in the **RAW DATA** tab in SMARTS)*		
4. Were the effluent samples sent to a laboratory certified for such analyses by the State Department of Health Services?		
5. Were unauthorized non-stormwater discharges eliminated?		
L. NON-VISIBLE POLLUTANT MONITORING [CGP Attachment C, Section I.7]		
1. Were any breaches, malfunctions, leakages, or spills observed during a visual inspection?		
2. How many potential discharges of non-visible pollutants were identified?		
3. For each discharge event (of non-visible pollutants), were samples collected in compliance with **CGP Attachment C, Section I.7.d**? *(Analytical data must be entered in the **RAW DATA** tab in SMARTS)*		
4. For each discharge event was a comparison sample collected (uncontaminated sample that did not come into contact with the pollutant)? *(Analytical data must be entered in the **RAW DATA** tab in SMARTS)*		
M. RECORDS [CGP Attachment C, Section I.9]		
1. Are all records of all stormwater monitoring information retained on-site?		
N. TRAINING		
1. Was a Qualified SWPPP Practitioner (QSP) in reasonable charge of SWPPP implementation?		
If **Yes**, Provide Name and Certificate Number:		
2. Were all individuals conducting BMP installation, inspection, maintenance and repairs trained appropriately?		
3. Are complete training records kept on-site and available upon request?		

FORM 1 *This form is designed to be consistent with SMARTS Form 1 and shall contain the same information provided via SMARTS for annual reporting*		
	Yes, No, N/A, if No provide comment	
Authorized NSWD		
Were any authorized Non-Stormwater Discharges observed from July-September?		
Were any authorized Non- Stormwater Discharges observed from October-December?		
Were any authorized Non- Stormwater Discharges observed from January-March?		
Were any authorized Non- Stormwater Discharges observed from April-June?		
Unauthorized		
Were any unauthorized Non- Stormwater Discharges observed from July-September?		
Were any unauthorized Non- Stormwater Discharges observed from October-December?		
Were any unauthorized Non- Stormwater Discharges observed from January-March?		
Were any unauthorized Non- Stormwater Discharges observed from April-June?		

FORM 2

This form is designed to be consistent with SMARTS Form 2 and shall contain the same information provided via SMARTS for annual reporting

Quarter	Date	Authorized or Unauthorized	Source and Location of NSWD	Described NSWD characteristics at the source	Describe NSWD Characteristics at Discharge Location	Described any revised or new BMPs
1						
2						
3						
4						

FORM 3

This form is designed to be consistent with SMARTS Form 3 and shall contain the same information provided via SMARTS for annual reporting

Please enter a general summary of any BMP deficiencies identified for each quarter and the corrective actions taken. Maximum up to 1000 characters.
July - Sept
Oct-Dec
Jan- March
April-June

Appendix E Attachment 1 QSPs

QSP	
Name:	ID:
Company:	Phone:

Appendix E Attachment 2 Inspection Log

Construction Start Date: ______________________________

Date	Inspection	BMP Deficiency, Maintenance or Repair	Precipitation Recorded	QRE

Appendix E Attachment 3 Inspection Records

Copies of Inspection Reports to be filed here.

Appendix E Attachment 4 SWPPP Training Records

Copies of Training Records to be filed here

Appendix E Attachment 5 Sampling and Analysis Results

Include: A summary and evaluation of all sampling and analysis results, including copies of laboratory reports, QA/QC, the analytical method(s), method reporting unit(s), and method detection limit(s) of each analytical parameter (analytical results that are less than the method detection limit shall be reported as "less than the method detection limit").

Appendix F: Submitted Changes to PRDs

Log of Updated PRDs

The General Permit allows for the reduction or increase of the total acreage covered under the General Permit when a portion of the project is complete and/or conditions for termination of coverage have been met; when ownership of a portion of the project is purchased by a different entity; or when new acreage is added to the project.

Modified PRDs shall be filed electronically within 30 days of a reduction or increase in total disturbed area if a change in permit covered acreage is to be sought. The SWPPP shall be modified appropriately, with revisions and amendments recorded in Appendix D. Updated PRDs submitted electronically via SMARTS can be found in this Appendix.

This appendix includes all of the following updated PRDs (check all that apply):

☐ Revised Notice of Intent (NOI);

☐ Revised Site Map;

☐ Revised Risk Assessment;

☐ New landowner's information (name, address, phone number, email address); and

☐ New signed certification statement.

_____
Legally Responsible Person

_____ Signature of Authorized Representative of Legally Responsible Person or Approved Signatory	_____ Date
_____ Name of Authorized Representative of Legally Responsible Person or Approved Signatory	_____ Telephone Number

Appendix G: Construction Schedule

Appendix H: Construction Activities, Materials Used, and Associated Pollutants

Table H.1 POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES

NOTE: This is a comprehensive list of Construction Activity-related pollutants; not all apply to the project.

General Work Activity/ Products With Potential Stormwater Pollutants	Specific Work Activity/Products With Potential Stormwater Pollutants	Pollutant Categories
Adhesives	• Adhesives, glues, resins, epoxy synthetics, PVC cement • Caulks, sealers, putty, sealing agents and • Coal tars (naphtha, pitch)	Oil and Grease, Synthetic Organics[1]
Asphalt paving/curbs	• Hot and cold mix asphalt	Oil and Grease
Cleaners	• Polishes (metal, ceramic, tile) • Etching agents • Cleaners, ammonia, lye, caustic sodas, bleaching agents and chromate salts	Metals, Synthetic Organics
Concrete / Masonry	• Cement and brick dust • Colored chalks • Concrete curing compounds • Glazing compounds • Surfaces cleaners • Saw cut slurries • Tile cutting	Metals, Synthetic Organics
Drywall	• Saw-cutting drywall	Metals
Framing/Carpentry	• Sawdust, particle board dust, and treated woods • Saw cut slurries	Metals, Synthetic Organics
Heating, Ventilation, Air Conditioning	• Demolition or construction of air condition and heating systems	Metals, Synthetic Organics
Insulation	• Demolition or construction involving insulation, venting systems	Metals, Synthetic Organics
Liquid waste	• Wash waters • Irrigation line testing/flushing	Metals, Synthetic Organics
Painting	• Paint thinners, acetone, methyl ethyl ketone, stripper paints, lacquers, varnish, enamels, turpentine, gum spirit, solvents, dyes, stripping pigments and sanding	Metals, Synthetic Organics
Planting / Vegetation Management	• Vegetation control (pesticides/herbicides) • Planting • Plant maintenance • Vegetation removal	Nutrients, Metals, Synthetic Organics
Plumbing	• Solder (lead, tin), flux (zinc chloride), pipe fitting • Galvanized metal in nails, fences, and electric wiring	Metals, Synthetic Organics
Removal of existing structures	• Demolition of asphalt, concrete	Metals, Oil and Grease, Synthetic Organics

Table H.1 POLLUTANTS ASSOCIATED WITH CONSTRUCTION ACTIVITIES

NOTE: This is a comprehensive list of Construction Activity-related pollutants; not all apply to the project.

General Work Activity/ Products With Potential Stormwater Pollutants	Specific Work Activity/Products With Potential Stormwater Pollutants	Pollutant Categories
Roofing	• Flashing • Saw cut slurries (tile cutting) • Shingle scrap and debris	Metals, Oil and Grease, Synthetic Organics
Sanitary waste	• Portable toilets • Disturbance of existing sewer lines.	Nutrients
Soil preparation/amendments	• Use of soil additives/amendments	Nutrients
Solid waste	• Litter, trash and debris • Vegetation	Gross Pollutants
Utility line testing and flushing	• Hydrostatic test water • Pipe flushing	Synthetic Organics
Vehicle and equipment use	• Equipment operation • Equipment maintenance • Equipment washing • Equipment fueling	Oil and Grease

[1] Synthetic Organics are defined in Table 1.2 of the CASQA *Stormwater BMP Handbook Portal: Construction* as adhesives, cleaners, sealants, solvents, etc. These are generally categorized as VOCs or SVOCs.

Appendix I: Construction BMP Fact Sheets

General Permit BMP Requirements	SWPPP Section	CGP Pg #	Associated CASQA BMPs	Selected BMPs (or N/A)
BMP Requirements for Erosion and Sediment Control				
Implement effective wind erosion control.	3.2.1	Pg 5 of Att. C or D	**WE-1**	✓
Provide effective soil cover for inactive areas and finished slopes, open space, utility backfill, and completed lots.	3.2.1	Pg 5 of Att. C or D	**EC-3**, **EC-4**, EC-5, EC-16	✓
Limit the use of plastic materials when more sustainable, environmentally friendly alternatives exist. Where plastic materials are deemed necessary, the QSD shall consider the use of plastic materials resistant to solar degradation.		Pg 5 of Att. C or D	**WM-3**	✓
Establish and maintain effective perimeter controls and stabilize construction entrances and exits to sufficiently control erosion and sediment discharges from the site.	3.2.2	Pg 5 of Att. C or D	SE-1 ,**SE-5**, **SE-6**, **SE-7**, TC-1 TC-2, TC-3 **WM-3**	✓
On sites where sediment basins/traps are to be used, at a minimum, design sediment basins according to the method provided in *Stormwater BMP Handbook Portal: Construction*.	3.2.2	Pg 5 of Att. C or D	SE-2, SE-3	N/A
Implement appropriate erosion control BMPs (runoff control and soil stabilization) in conjunction with sediment control BMPs for areas under active construction.	3.2.2	Pg 5 of Att. C or D	**EC-1**, **EC-2** **EC-3**, **EC-4**, EC-5, EC-6, EC-9 EC-10, EC-16 SE-1, SE-4 **SE-5**	✓
Apply linear sediment controls along the toe of the slope; face of the slope; and at the grade breaks of exposed slopes to comply with sheet flow lengths in accordance with General Permit.	3.2.2	Pg 5 of Att. C or D	SE-1 ,**SE-5**, **SE-7**	✓
Ensure that construction activity traffic to and from the project is limited to entrances and exits that employ effective controls to prevent offsite tracking of sediment.	3.2.2	Pg 6 of Att. C or D	TC-1 , TC-2 TC-3, **SE-7**	✓

General Permit BMP Requirements	SWPPP Section	CGP Pg #	Associated CASQA BMPs	Selected BMPs (or N/A)
Ensure that storm drain inlets and perimeter controls, runoff control BMPs, and pollutant controls at entrances and exits (e.g. tire wash-off locations) are maintained and protected from activities that reduce their effectiveness.	3.2.2	Pg 6 of Att. C or D	All BMPs	✓
Inspect on a daily basis immediate access roads. At a minimum daily (when necessary) and prior to a rain event. The LRP shall remove sediment or other construction activity-related materials that are deposited on the roads (by vacuuming or sweeping).	3.2.2	Pg 6 Att. D	TC-1, TC-2 TC-3 ,**SE-7**	✓
The Regional Water Quality Control Board may require implementation of additional site-specific sediment control requirements if the implementation of the other requirements in this section is not adequately protecting the receiving waters.	3.2.2	Pg 5 Att. C Pg 6 Att. D		
BMP Requirements for Run-on and Runoff Controls				
Effectively manage run-on, runoff within the site and runoff that discharge off the site.	3.2.3	Pg 5 Att. C Pg 6 Att. D		✓
Run-on from off-site shall be directed away from disturbed areas or shall collectively be in compliance with the effluent limitation in the CGP.	3.2.3	Pg 5 Att. C Pg 6 Att. D		✓
BMP Requirements for Construction and Landscape Material				
Conduct an inventory of the products used and/or expected to be used and the end products that are produced and/or expected to be produced.	3.3.2	Pg 1, Att. C, D		✓
Cover and berm loose stockpiled construction (or landscape materials that are not actively being used (i.e. soil, spoils, aggregate, fly-ash, stucco, hydrated lime, etc.).	3.3.2	Pg 1, Att. C, D	**WM-3**	✓
Store chemicals in watertight containers (with appropriate secondary containment to prevent spillage or leakage) or in a storage shed (completely enclosed).	3.3.2	Pg 2, Att. C, D	**WM-1**, **WM-2** **WM-4**, **WM-6**	✓
Minimize exposure of construction materials to precipitation.	3.3.2	Pg 2, Att. C, D	**WM-1**, **WM-2** **WM-4**, **WM-5** **WM-6**, WM-7 WM-10	✓

General Permit BMP Requirements	SWPPP Section	CGP Pg #	Associated CASQA BMPs	Selected BMPs (or N/A)
Implement BMPs to prevent the off-site tracking of loose construction and landscape materials.	3.3.2	Pg 2, Att. C, D	TC-1, TC-2, TC-3	N/A
BMP Requirements for Waste Management				
Prevent disposal of rinse or wash waters or materials on impervious or pervious site surfaces or into the storm drain system.	3.3.2	Pg 2, Att. C, D & E	**NS-1**, **NS-3** NS-8, NS-12 NS-13	✓
Ensure the containment of sanitation facilities (e.g., portable toilets) to prevent discharges of pollutants to the stormwater drainage system or receiving water.	3.3.2	Pg 2, Att. C, D & E	**WM-9**	✓
Clean or replace sanitation facilities and inspecting them regularly for leaks and spills.	3.3.2	Pg 2, Att. C, D & E	**WM-9**	✓
Cover waste disposal containers at the end of every business day and during a rain event.	3.3.2	Pg 2, Att. C, D & E	**WM-1**, **WM-2** **WM-4**, **WM-5** **WM-6**, WM-7 WM-10	✓
Prevent discharges from waste disposal containers to the stormwater drainage system or receiving water.	3.3.2	Pg 2, Att. C, D & E	**WM-1**, **WM-2** **WM-4**, **WM-5** **WM-6**, WM-7 **WM-9**, WM-10	✓
Contain and securely protect stockpiled waste material from wind and rain at all times unless actively being used.	3.3.2	Pg 2, Att. C, D & E	**WM-3**	✓
Implement procedures that effectively address hazardous and non-hazardous spills.	3.3.2	Pg 2, Att. C, D & E	**WM-4**	✓
Develop a spill response and implementation element of the SWPPP prior to commencement of construction activities. The SWPPP shall require that: Equipment and materials for cleanup of spills shall be available onsite and that spills and leaks shall be cleaned up immediately and disposed of properly; and appropriate spill response personnel are assigned and trained.	3.3.2	Pg 2, Att. C, D & E	**WM-4**	✓

General Permit BMP Requirements	SWPPP Section	CGP Pg #	Associated CASQA BMPs	Selected BMPs (or N/A)
Ensure the containment of concrete washout areas and other washout areas that may contain additional pollutants so there is no discharge into the underlying soil and onto the surrounding areas.	3.3.2	Pg 3, Att. C, D & E	**WM-8**	✓
BMP Requirements for Vehicle Storage and Maintenance				
Prevent oil, grease, or fuel from leaking into the ground, storm drains or surface waters.	3.3.2	Pg 3, Att. C, D & E	**NS-9** NS-10	✓
Place equipment or vehicles, which are to be fueled, maintained and stored in a designated area fitted with appropriate BMPs.	3.3.2	Pg 2, Att. C, D & E	**WM-2**, **WM-4** **NS-9**, NS-10	✓
Clean leaks immediately and disposing of leaked materials properly.	3.3.2	Pg 2, Att. C, D & E	**WM-4**	✓
BMP Requirements for Air Deposition (Attachment C, D, & E parts B.6)				
Control the air deposition of site materials and from site operations. Such particulates can include, but are not limited to, sediment, nutrients, trash, metals, bacteria, oil and grease and organics.	3.2.1	Pg 4 of Att. C or D	**WE-1**	✓
BMP Requirements to Control Non-Stormwater Discharges (Attachment C, D and E part C)				
Implement measures to control non-stormwater discharges during construction.	3.3.1	Pg 4, Att. C, D & E	**NS-3**, NS-8 **NS-9**, NS-10 NS-12, NS-13 TC-1, TC-2 TC-3	✓
Wash vehicles in such a manner as to prevent non-stormwater discharges to surface waters or MS4 drainage systems.	3.3.1	Pg 4, Att. C, D & E	NS-8	N/A
Clean streets in such a manner as to prevent non-stormwater discharges from reaching surface water or MS4 drainage systems.	3.3.1	Pg 4, Att. C, D & E	TC-1, TC-2 TC-3, **SE-7**	✓

Appendix J: Inspection and Monitoring Forms

BMP INSPECTION REPORT

Date and Time of Inspection:			Date Report Written:	
Inspection Type: (Circle one)	Weekly *Complete Parts I,II,III and VII*	Pre-Storm *Complete Parts I,II,III,IV and VII*	During Rain Event *Complete Parts I, II, III, V, and VII*	Post-Storm *Complete Parts I,II,III,VI and VII*

Part I. General Information

Site Information

Construction Site Name: California SR 36 Improvement Project CA FLAP SR36(1)			
Construction stage and completed activities:			Approximate area of site that is exposed:
Photos Taken: (Circle one)	Yes	No	Photo Reference IDs:

Weather

Estimate storm beginning: (date and time)	Estimate storm duration: (hours)
Estimate time since last storm: (days or hours)	Rain gauge reading and location: (in)

Is a "Qualifying Event" predicted or did one occur (i.e., 0.5" rain with 48-hrs or greater between events)? (Y/N)
If yes, summarize forecast:

Exemption Documentation (explanation required if inspection could not be conducted). Visual inspections are not required outside of business hours or during dangerous weather conditions such as flooding or electrical storms.

Inspector Information

Inspector Name:	Inspector Title:
Signature:	Date:

Part II. BMP Observations. Describe deficiencies in Part III.			
Minimum BMPs for Risk Level 2 Sites	Failures etc (Y, N, N/A)	Action Rq'd (Y/N)	Action Implemented (Date)
Good Housekeeping for Construction Materials			
Inventory of products (excluding materials designed to be outdoors)			
Stockpiled construction materials not actively in use are covered and bermed			
All chemicals are stored in watertight containers with appropriate secondary containment, or in a completely enclosed storage shed			
Construction materials are minimally exposed to precipitation			
BMPs preventing the offsite tracking of materials are implemented and properly effective			
Good Housekeeping for Waste Management			
Wash/rinse water and materials are prevented from being disposed into the storm drain system			
Portable toilets are contained to prevent discharges of waste			
Sanitation facilities are clean and with no apparent for leaks and spills			
Equipment is in place to cover waste disposal containers at the end of business day and during rain events			
Discharges from waste disposal containers are prevented from discharging to the storm drain system / receiving water			
Stockpiled waste material is securely protected from wind and rain if not actively in use			
Procedures are in place for addressing hazardous and non-hazardous spills			
Appropriate spill response personnel are assigned and trained			
Equipment and materials for cleanup of spills is available onsite			
Washout areas (e.g., concrete) are contained appropriately to prevent discharge or infiltration into the underlying soil			
Good Housekeeping for Vehicle Storage and Maintenance			
Measures are in place to prevent oil, grease, or fuel from leaking into the ground, storm drains, or surface waters			
All equipment or vehicles are fueled, maintained, and stored in a designated area with appropriate BMPs			
Vehicle and equipment leaks are cleaned immediately and disposed of properly			
Good Housekeeping for Landscape Materials			
Stockpiled landscape materials such as mulches and topsoil are contained and covered when not actively in use			
Erodible landscape material has not been applied 2 days before a forecasted rain event or during an event			
Erodible landscape materials are applied at quantities and rates in accordance with manufacturer recommendations			

Part II. BMP Observations Continued. Describe deficiencies in Part III.			
Minimum BMPs for Risk Level 2 Sites	Failures etc (Y, N, N/A)	Action Rq'd (Y/N)	Action Implemented (Date)
Good Housekeeping for Landscape Materials			
Bagged erodible landscape materials are stored on pallets and covered			
Good Housekeeping for Air Deposition of Site Materials			
Good housekeeping measures are implemented onsite to control the air deposition of site materials and from site operations			
Non-Stormwater Management			
Non-Stormwater discharges are properly controlled			
Vehicles are washed in a manner to prevent non-stormwater discharges to surface waters or drainage systems			
Streets are cleaned in a manner to prevent unauthorized non-stormwater discharges to surface waters or drainage systems.			
Erosion Controls			
Wind erosion controls are effectively implemented			
Effective soil cover is provided for disturbed areas inactive (i.e., not scheduled to be disturbed for 14 days) as well as finished slopes, open space, utility backfill, and completed lots			
The use of plastic materials is limited in cases when a more sustainable, environmentally friendly alternative exists.			
Sediment Controls			
Perimeter controls are established and effective at controlling erosion and sediment discharges from the site			
Entrances and exits are stabilized to control erosion and sediment discharges from the site			
Sediment basins are properly maintained			
Linear sediment control along toe of slope, face of slope an at grade breaks (Risk Level 2)			
Limit construction activity to and from site to entrances and exits that employ effective controls to prevent offsite tracking (Risk Level 2)			
Ensure all storm, drain inlets and perimeter controls, runoff control BMPs and pollutants controls at entrances and exits are maintained and protected from activities the reduce their effectiveness (Risk Level 2)			
Inspect all immediate access roads daily (Risk Level 2)			
Run-On and Run-Off Controls			
Run-on to the site is effectively managed and directed away from all disturbed areas.			
Other			
Are the project SWPPP and BMP plan up to date, available on-site and being properly implemented?			

Part III. Descriptions of BMP Deficiencies		
Deficiency	**Repairs Implemented: Note - Repairs must begin within 72 hours of identification and complete repairs as soon as possible.**	
	Start Date	**Action**
1.		
2.		
3.		

Part IV. Additional Pre-Storm Observations. Note the presence or absence of floating and suspended materials, sheen, discoloration, turbidity, odors, and source(s) of pollutants(s).	
	Yes, No, N/A
Do stormwater storage and containment areas have adequate freeboard? If no, complete Part III.	
Are drainage areas free of spills, leaks, or uncontrolled pollutant sources? If no, complete Part VII and describe below.	
Notes:	
Are stormwater storage and containment areas free of leaks? If no, complete Parts III and/or VII and describe below.	
Notes:	

Part V. Additional During Storm Observations. If BMPs cannot be inspected during inclement weather, list the results of visual inspections at all relevant outfalls, discharge points, and downstream locations. Note odors or visible sheen on the surface of discharges. Complete Part VII (Corrective Actions) as needed.	
Outfall, Discharge Point, or Other Downstream Location	
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description
Location	Description

Part VI. Additional Post-Storm Observations. Visually observe (inspect) stormwater discharges at all discharge locations within two business days (48 hours) after each qualifying rain event, and observe (inspect) the discharge of stored or contained stormwater that is derived from and discharged subsequent to a qualifying rain event producing precipitation of ½ inch or more at the time of discharge. Complete Part VII (Corrective Actions) as needed.	
Discharge Location, Storage or Containment Area	**Visual Observation**

Part VII. Additional Corrective Actions Required. Identify additional corrective actions not included with BMP Deficiencies (Part III) above. Note if SWPPP change is required.	
Required Actions	**Implementation Date**

Risk Level 2 **Effluent Sampling Report / Inspection and Monitoring Form**			
Construction Site Name: California SR 36 Improvement Project CA FLAP SR36(1)		Date:	Time Start:
Sampler:			
Sampling Event Type:	☐Storm-water	☐Non-storm-water	☐ Non-visible pollutant

Field Meter Calibration	
pH Meter ID No./Desc.: Calibration Date/Time:	Turbidity Meter ID No./Desc.: Calibration Date/Time:

Field pH and Turbidity Measurements

Discharge Location Description	pH	Turbidity	Time

Grab Samples Collected

Discharge Location Description	Sample Type	Time

Additional Sampling Notes:
Time End:

NAL Exceedance Evaluation Summary Report	Page __ of __
Project Name	**California SR 36 Improvement Project CA FLAP SR36(1)**
Project WDID	
Project Location	
Date of Exceedance	
Type of Exceedance	NAL Daily Average ☐ pH ☐ Turbidity ☐ Other (specify) _____
Measurement or Analytical Method	☐ Field meter (Sensitivity: _____) ☐ Lab method (specify) _____ (Reporting Limit: _____) (MDL: _____)
Calculated Daily Average	☐ pH _ pH units ☐ Turbidity ___ NTU
Rain Gauge Measurement	_____ inches
Visual Observations on Day of Exceedance	
Description of BMPs in Place at Time of Event	
Initial Assessment of Cause	

NAL Exceedance Evaluation Summary Report	Page __ of __
Corrective Actions Taken (deployed after exceedance)	
Additional Corrective Actions Proposed	
Report Completed By	_____ (Print Name, Title)
Signature	_____

Quarterly Visual Observations of Non-Stormwater Discharges (NSWD)

[] January – March [] April – June [] July-September [] October- December

Project Name California SR 36 Improvement Project CA FLAP SR36(1) Drainage Area (as identified on SWPPP Map) _____

All projects must

- conduct one visual observation (inspection) quarterly
- visually inspect each drainage area for the presence of (or indication of prior) unauthorized and authorized non-stormwater discharges and their sources.
- maintain on-site records indicating the personnel performing the visual observation (inspections), the dates and approximate time each drainage area and non-stormwater discharge was observed, and the response taken

DATE/TIME OF OBSERVATION **OBSERVER NAME AND TITLE**	**TYPE OF DISCHARGE**[1]	**SOURCE/ LOCATION** Example Condensate from Air Conditioning units at Building C	**DESCRIBE POLLUTANT CHARACTERISTICS** (Odors, Floating or Suspended Martial, Sheen, Discoloration, Turbidity)	**ACTIONS** To eliminate unauthorized NSWD and to reduce/ prevent pollutants from contacting NSWD	**DESCRIBE ANY NEW OR REVISED BMPS AND THEIR IMPLEMENTATION DATE**
Date: Time: Name: Title:	[] Authorized [] Unauthorized				
Date: Time: Name: Title:	[] Authorized [] Unauthorized				
Date: Time: Name: Title:	[] Authorized [] Unauthorized				
Date: Time: Name: Title:	[] Authorized [] Unauthorized				
Date: Time: Name: Title:	[] Authorized [] Unauthorized				

Appendix K: Weather Reports & Rain Event Action Plan

Rain Gauge Log Sheet				
Construction Site Name: California SR 36 Improvement Project CA FLAP SR36(1)				
WDID #:				
Date (mm/dd/yy)	Time (24-hr)	Initials	Rainfall Depth (Inches)	Notes:

Rain Event Action Plan (REAP)

Date:		**WDID Number:**	
Date Rain Predicted to Occur:		**Predicted % chance of rain:**	

Site Information:

Site Name, City and Zip Code Project Risk Level: □ Risk Level 2 □ Risk Level 3

Site Stormwater Manager Information:

Name, Company, Emergency Phone Number (24/7)

Erosion and Sediment Control Contractor – Labor Force contracted for the site:

Name, Company, Emergency Phone Number (24/7)

Stormwater Sampling Agent:

Name, Company, Emergency Phone Number (24/7)

Current Phase of Construction

Check ALL the boxes below that apply to your site.

❑ Grading and Land Development	❑ Vertical Construction	❑ Inactive Site
❑ Streets and Utilities	❑ Final Landscaping and Site Stabilization	❑ Other:

Activities Associated with Current Phase(s)

Check ALL the boxes below that apply to your site (some apply to all Phases).

Grading and Land Development:

❑ Demolition	❑ Vegetation Removal	❑ Vegetation Salvage-Harvest
❑ Rough Grade	❑ Finish Grade	❑ Blasting
❑ Soil Amendment(s):	❑ Excavation (_____ ft)	❑ Soils Testing
❑ Rock Crushing	❑ Erosion and Sediment Control	❑ Surveying
❑ Equip. Maintenance/Fueling	❑ Material Delivery and Storage	❑ Other:

Streets and Utilities:

❑ Finish Grade	❑ Utility Install: water-sewer-gas	❑ Paving Operations
❑ Equip. Maintenance/Fueling	❑ Storm Drain Installation	❑ Material Delivery & Storage
❑ Curb and Gutter/Concrete Pour	❑ Masonry	❑ Other:

Vertical Construction:

❑ Framing	❑ Carpentry	❑ Concrete/Forms/Foundation
❑ Masonry	❑ Electrical	❑ Painting
❑ Drywall/Interior Walls	❑ Plumbing	❑ Stucco
❑ Equip. Maintenance/Fueling	❑ HVAC	❑ Tile
❑ Exterior Siding	❑ Insulation	❑ Landscaping & Irrigation
❑ Flooring	❑ Roofing	❑ Other:

Final Landscaping & Site Stabilization:

❑ Stabilization	❑ Vegetation Establishment	❑ E&S Control BMP Removal
❑ Finish Grade	❑ Storage Yard/ Material Removal	❑ Landscape Installation
❑ Painting and Touch-Up	❑ Irrigation System Testing	❑ Other:
❑ Drainage Inlet Stencils	❑ Inlet Filtration	❑ Perm. Water Quality Ponds
❑ Other:	❑ Other:	❑ Other:

Inactive Construction Site:

❑ E & S Control Device Installation	❑ Routine Site Inspection	❑ Trash Removal
❑ E & S Control Device Maintenance	❑ Street Sweeping	❑ Other:

Rain Event Action Plan (REAP)

Date:		WDID Number:	

Trades Active on Site during Current Phase(s)

Check ALL the boxes below that apply to your site

❑	Storm Drain Improvement	❑	Grading Contractor	❑	Surveyor- Soil Technician
❑	Street Improvements	❑	Water Pipe Installation	❑	Sanitary Station Provider
❑	Material Delivery	❑	Sewer Pipe Installation	❑	Electrical
❑	Trenching	❑	Gas Pipe Installation	❑	Carpentry
❑	Concrete Pouring	❑	Electrical Installation	❑	Plumbing
❑	Foundation	❑	Communication Installation	❑	Masonry
❑	Demolition	❑	Erosion and Sediment Control	❑	Water, Sewer, Electric Utilities
❑	Material Delivery	❑	Equipment Fueling/Maintenance	❑	Rock Products
❑	Tile Work- Flooring	❑	Utilities, e.g., Sewer, Electric	❑	Painters
❑	Drywall	❑	Roofers	❑	Carpenters
❑	HVAC installers	❑	Stucco	❑	Pest Control: e.g., termite prevention
❑	Exterior Siding	❑	Masons	❑	Water Feature Installation
❑	Insulation	❑	Landscapers	❑	Utility Line Testers
❑	Fireproofing	❑	Riggers	❑	Irrigation System Installation
❑	Steel Systems	❑	Utility Line Testers	❑	Other:

Trade Contractor Information Provided

Check ALL the boxes below that apply to your site.

❑	Educational Material Handout	❑	Tailgate Meetings	❑	Training Workshop
❑	Contractual Language	❑	Fines and Penalties	❑	Signage
❑	Other:	❑	Other:	❑	Other:

Rain Event Action Plan (REAP)

Date of REAP		**WDID Number:**	
Date Rain Predicted to Occur:		**Predicted % chance of rain:**	

Predicted Rain Event Triggered Actions

Below is a list of suggested actions and items to review for this project. Each active Trade should check all material storage areas, stockpiles, waste management areas, vehicle and equipment storage and maintenance, areas of active soil disturbance, and areas of active work to ensure the proper implementation of BMPs. Project-wide BMPs should be checked and cross-referenced to the BMP progress map.

Trade or Activity	Suggested action(s) to perform / item(s) to review prior to rain event
❑ Information & Scheduling	❑ Inform trade supervisors of predicted rain ❑ Check scheduled activities and reschedule as needed ❑ Alert erosion/sediment control provider ❑ Alert sample collection contractor (if applicable) ❑ Schedule staff for extended rain inspections (including weekends & holidays) ❑ Check Erosion and Sediment Control (ESC) material stock ❑ Review BMP progress map ❑ Other:_____ ❑ _____ ❑ _____
❑ Material storage areas	❑ Material under cover or in sheds (ex: treated woods and metals) ❑ Perimeter control around stockpiles ❑ Other:_____ ❑ _____ ❑ _____
❑ Waste management areas	❑ Dumpsters closed ❑ Drain holes plugged ❑ Recycling bins covered ❑ Sanitary stations bermed and protected from tipping ❑ Other:_____ ❑ _____ ❑ _____
❑ Trade operations	❑ Exterior operations shut down for event (e.g., no concrete pours or paving) ❑ Soil treatments (e.g.,: fertilizer) ceased within 24 hours of event ❑ Materials and equipment (ex: tools) properly stored and covered ❑ Waste and debris disposed in covered dumpsters or removed from site ❑ Trenches and excavations protected ❑ Perimeter controls around disturbed areas ❑ Fueling and repair areas covered and bermed ❑ Other:_____ ❑ _____ ❑ _____
❑ Site ESC BMPs	❑ Adequate capacity in sediment basins and traps ❑ Site perimeter controls in place ❑ Catch basin and drop inlet protection in place and cleaned ❑ Temporary erosion controls deployed ❑ Temporary perimeter controls deployed around disturbed areas and stockpiles ❑ Roads swept; site ingress and egress points stabilized ❑ Other:_____ ❑ _____ ❑ _____
❑ Concrete rinse out area	❑ Adequate capacity for rain ❑ Wash-out bins covered ❑ Other:_____ ❑ _____ ❑ _____
❑ Spill and drips	❑ All incident spills and drips, including paint, stucco, fuel, and oil cleaned ❑ Drip pans emptied ❑ Other:_____ ❑ _____ ❑ _____

❑ Other / Discussion / Diagrams	❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____ ❑ _____

Attach a printout of the weather forecast from the NOAA website to the REAP.

I certify under penalty of law that this Rain Event Action Plan (REAP) will be performed in accordance with the General Permit by me or under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations.

_____Date: _____
Qualified SWPPP Practitioner (Use ink please)

Appendix L: Training Reporting Form

Trained Contractor Personnel Log

Stormwater Management Training Log and Documentation

Project Name: California SR 36 Improvement Project CA FLAP SR36(1)
WDID #: _____

Stormwater Management Topic: (check as appropriate)

☐ Erosion Control ☐ Sediment Control
☐ Wind Erosion Control ☐ Tracking Control
☐ Non-Stormwater Management ☐ Waste Management and Materials Pollution Control
☐ Stormwater Sampling

Specific Training Objective: _____

Location: _____ Date: _____

Instructor:_____ Telephone: _____

Course Length (hours): _____

Attendee Roster (Attach additional forms if necessary)

Name	Company	Phone

As needed, add proof of external training (e.g., course completion certificates, credentials for QSP, QSD).

Appendix M:Responsible Parties

Authorization of Approved Signatories

Project Name: California SR 36 Improvement Project CA FLAP SR36(1)
WDID #: _____

Name of Personnel	Project Role	Company	Signature	Date
	AS			
	AS			

_____ _____

LRP's Signature Date

_____ _____

LRP Name and Title Telephone Number

Identification of QSP

Project Name: California SR 36 Improvement Project CA FLAP SR36(1)
WDID #: _____

The following are QSPs associated with this project

Name of Personnel(1)	Company	Date

(1) If additional QSPs are required on the job site add additional lines and include information here

Authorization of Data Submitters

Project Name: California SR 36 Improvement Project CA FLAP SR36(1)
WDID #: _____

Name of Personnel	Project Role	Company	Signature	Date

_____ _____

Approved Signatory's Signature Date

_____ _____

Approved Signatory's Name and Title Telephone Number

Appendix N: Contractors and Subcontractors

Appendix O: Construction General Permit

State Water Resources Control Board (2009). Order 2009-0009-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

State Water Resources Control Board (2010). Order 2010-0014-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

State Water Resources Control Board (2012). Order 2012-0006-DWQ, NPDES General Permit No. CAS000002: National Pollutant Discharges Elimination System (NPDES) California General Permit for Stormwater Discharge Associated with Construction and Land Disturbing Activities.

Available on-line at:

http://www.waterboards.ca.gov/water_issues/programs/stormwater/construction.shtml.

CSMP Attachment 1: Chain of Custody Form

CHAIN-OF-CUSTODY **DATE:** **Lab ID:**

DESTINATION LAB: ATTN: **ADDRESS:** **Office Phone:** **Cell Phone:**							REQUESTED ANALYSIS				Notes:
SAMPLED BY:											
Contact:											
Project Name				California SR 36 Improvement Project CA FLAP SR36(1)							
Client Sample ID	**Sample Date**	**Sample Time**	**Sample Matrix**	**Container #**	**Container Type**	**Container Pres.**					
SENDER COMMENTS:						**RELINQUISHED BY**					
						Signature:					
						Print:					
						Company:					
						Date:			TIME:		
LABORATORY COMMENTS:						**RECEIVED BY**					
						Signature:					
						Print:					
						Company:					
						Date:		TIME:			

CSMP Attachment 2: Field Meter Instructions

CSMP Attachment 3: Supplemental Information